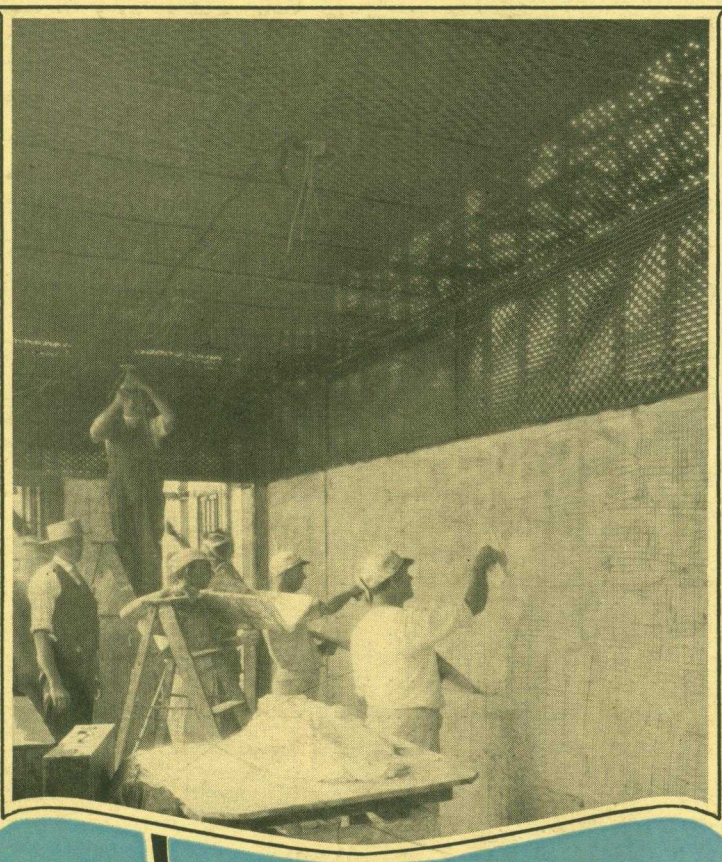
A. I. A. File No. 20b1

Bostwick ECONOMY



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Foreword

THIS booklet is designed to familiarize the building fraternity, as well as architects and owners, with the distinctive advantages of Bostwick products, particularly Bostwick "Truss-Loop" Metal Lath.

Catalog Section Included

A complete catalog of Bostwick Products is included, commencing on page 20, and including full data and dimensions on all Bostwick products.

Bostwick Line is Complete

While the emphasis in this booklet is placed on the distinctive merits of Bostwick "Truss-Loop" Metal Lath, we furnish every type of Metal Lath and Metal Lath Accessories for every purpose.

Known As a Dealer's Company

Completeness of the Bostwick Line as well as unfailing recognition of the Supply Dealer's position in the industry have built up a fine, loyal list of Bostwick Dealers, to whom it is a pleasure to refer prospective purchasers.

Deliveries are Prompt

Our dealers generally stock complete lines, but where it is necessary to call for special shipment, goods are on the way within twenty-four hours.

Experience Best Test

This booklet is in no sense a construction manual. Familiarity of the reader with general facts relating to Metal Lath construction is assumed.

However, a brief specification section is included and this company will be glad to put inquirers in touch with instances of any type of installation in which they are interested and to procure technical direction on any desired point, based on thirty-seven years' successful experience.

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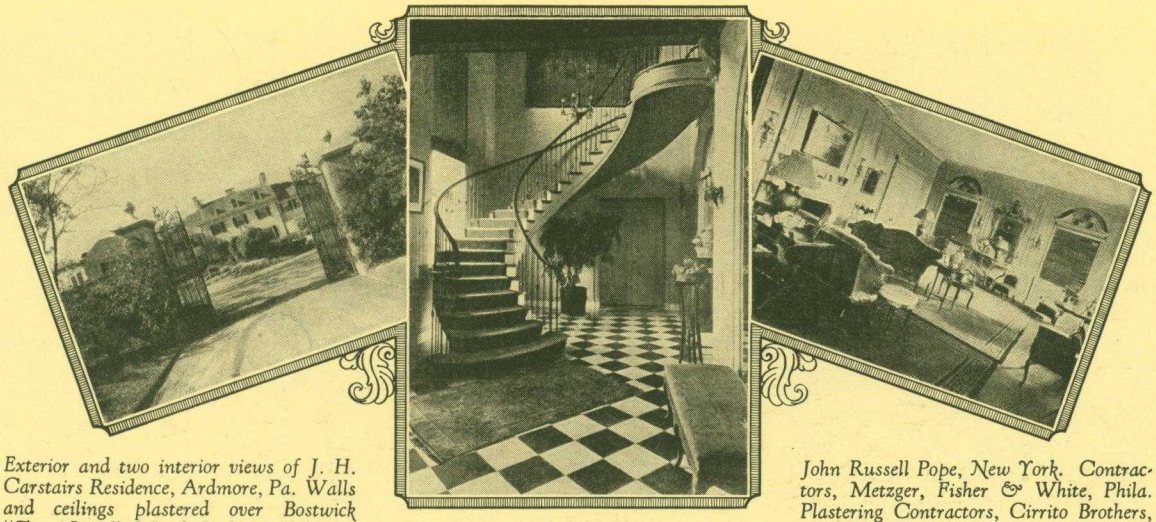
THE BOSTWICK STEEL LATH CO., NILES, OHIO

Note—Front cover illustration shows lathing and plastering operations in toll house of new Philadelphia-Camden bridge, employing Bostwick "Truss-Loop" Metal Lath. Ralph Modjeska, Chief Engineer; Mazzola & Mareza, Contractors; Smith & Dawson, Contracting Plasterers.



Exterior and two interior views of J. H. Carstairs Residence, Ardmore, Pa. Walls and ceilings plastered over Bostwick "Truss-Loop" Metal Lath. Architect, John Russell Pope, New York. Contractors, Metzger, Fisher & White, Phila. Plastering Contractors, Cirrito Brothers, Ardmore, Pa.

Bostwick Economy

BOSTWICK economy is the economy of excellence. More aptly than many other fine materials, Bostwick "Truss-Loop" Metal Lath illustrates the saving that is ultimately realized from a job well done.

These advantages may be variously reckoned in terms of human effort, of safety, length of service or initial dollars and cents.

Comparisons will be made in these pages, with materials whose first cost is less, in some cases, than Bostwick "Truss-Loop" Metal Lath and in other cases with materials costing more. Effort will be made, in either case, to help the reader to a decision that will afford lasting satisfaction.

Metal Lath for Every Purpose

The Bostwick Metal Lath Line includes every type of metal lath and every accessory used in Metal Lath installations.

Among these may be named (a) backing and reinforcement of plaster for interior walls and ceilings, (b) for exterior stucco, (c) reinforcement and centering of light concrete floors and roof slabs, (d) cement reinforcement for tile, marble and other special interior treatments, (e) support and reinforcement of two-inch plaster partitions, (f) for drop ceiling construction, (g) fire resisting treatment at danger points in wood construction, (h) crack resistance in the angles of wood lathed walls and ceilings, (i) fire resisting reinforcement for concrete around steel members in steel frame construction. (See index for respective operations.)

Different Types of Metal Lath

Bostwick Metal Lath is illustrated and described on pages 20 to 23.

While we manufacture Expanded Metal Lath and offer it in several forms, our distinctive major product is the famous Bostwick "Truss-Loop" Metal Lath, which has certain points of superiority, beyond those merits which it shares with all high-grade Metal Lath.

Bostwick Metal Lath was first made in 1890 and has been continuously manufactured and sold for thirty-five years. Of all brands of Metal Lath it has been most thoroughly tested by time and enjoys an unblemished record for good service.

What It Saves in Decorations

At home we are surrounded by plastered surfaces, yet in many a home no feature is so fragile as the wall or ceiling.

This is largely due to using a support which absorbs moisture, which is swelling or contracting according to the condition of the atmosphere.

Decorators tell us that much of the time on each repapering job is spent in patching plaster, that sagging plaster, or unevenness due to patching, retards true workmanship and adds heavily to the labor cost.

Consider, too, the many cases where plaster cracks, sagging plaster or the grid marks due to wood lath are the sole reasons for redecorating—when wall and ceiling would otherwise serve admirably for several seasons more.

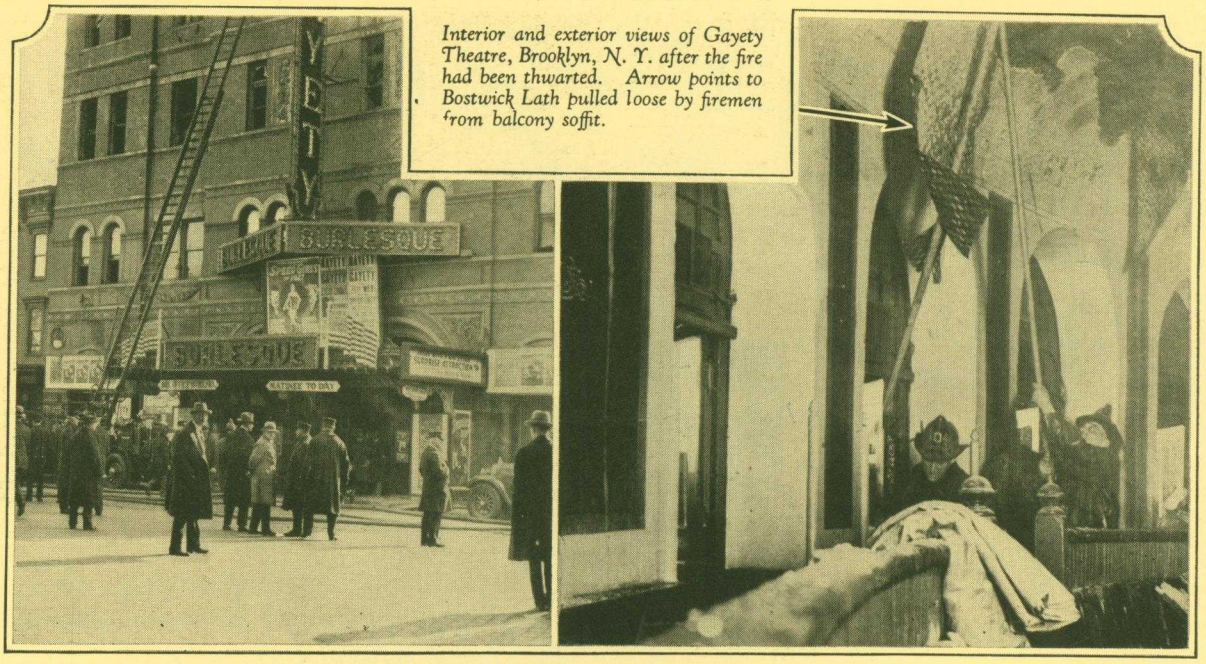
No Need to Re-plaster

Plaster over Bostwick Lath seems like a different substance from the insecure cracking material familiar in many buildings.

Bostwick Metal Lath minimizes the danger of cracking. Bostwick-backed walls and ceilings do not crack, but remain permanently true and beautiful.

Not only is redecorating postponed and economized, but replastering expense, a familiar item in many buildings, is entirely avoided.

THE BOSTWICK STEEL LATH CO., NILES, OHIO



Interior and exterior views of Gayety Theatre, Brooklyn, N. Y. after the fire had been thwarted. Arrow points to Bostwick Lath pulled loose by firemen from balcony soffit.

The Economy of Fire Resistance

IF the city of Providence, R. I., were to be totally destroyed by fire, with 15,000 deaths and 17,000 injuries (says Chief Kenlon of the New York fire department) we would have a true picture of the size of America's annual fire loss.

Most of this loss is easily preventable. Underwriters' statistics show that 95 per cent of the fires start inside the building.

Deadly, night fires are communicated to all portions of a home by following the space between walls and between ceilings and floors. Wood lath is the ready kindling on which they gain impetus until, suddenly, they seem to break out all over the house at once and complete destruction is a matter of a few moments.

Against this condition of hazard, Underwriters' tests have given a rating for one hour's resistance to plaster backed by metal lath on wooden studs.

You can insure against property loss, but you can't replace lives. Neither can you restore keepsakes nor eradicate the terror, the exposure, the inconvenience of a fire experience.

Bostwick "Truss-Loop" Economy saves fire loss by insurance in the wall and ceiling.

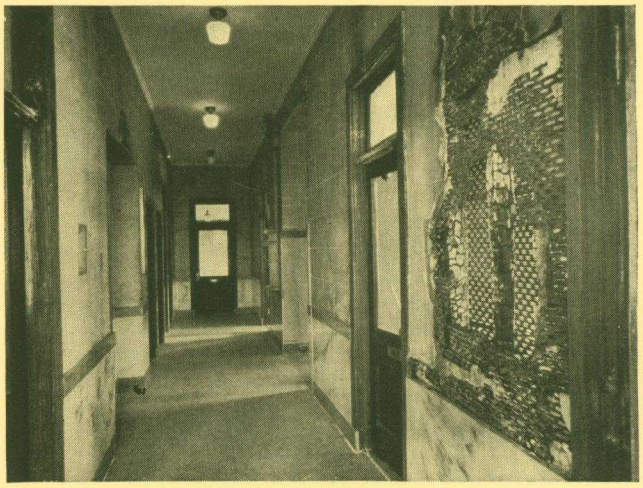
Records of Fire Safety

It is, of course, impossible to know more than a very few of the instances in which buildings are saved from destruction because of metal lath. Even the occupants fail to realize the narrowness of their escape, in many cases.

Bostwick "Truss-Loop" Lath saved an audience of 1,500 people in the Gayety Theatre, Brooklyn, N.Y., on March 14, 1927, when flames broke out twenty minutes after the performance had started. A projection room over a balcony was the place of origin. The soffit of the balcony was lathed with Bostwick and the audience was able to file out without the slightest injury—a striking contrast to the recent Canadian theatre fire in which 120 lives were lost.

Saves Media, Pa., Building

Only a few days before, February 21, 1927, word came of a fire in the County Building at Media, Pa., about which



Hallway of County Building, Media, Pa., Philip Green, builder and owner. Fire in an adjoining room was confined by Bostwick lathed walls so that damage was minimized. Plaster torn away by firemen.

THE BOSTWICK STEEL LATH CO., NILES, OHIO

the owner, Philip Green, writes to the Bostwick Steel Lath Co.: "I take this opportunity of advising you that I consider myself very fortunate in that I used this steel lath in the construction of this building, for if it had not been for the same, the fire would have spread and the entire building been burned to the ground. The lath and plaster, however, confined the fire to the partitions. I therefore take great pleasure in highly recommending your product to anyone in the building line, especially those who construct public buildings."

Mention might be made of The Tod House, a famous Youngstown, Ohio hostelry, the Courtland Hotel at Canton, Ohio, and the Tod Avenue School, Warren, Ohio, as places where serious fire danger has been thwarted by Bostwick Lath in the walls and ceilings.

One of the most striking instances of Bostwick permanence, under fire test conditions occured when the roof was burned from the Utica Free Academy, Utica, N. Y., which is thus described by the architect, Egbert Bagg.

Remarkable Example of Clinch

"The Utica Free Academy was built in 1898 and 1899 and was partly burned in April, 1908, the roof and attic floor being entirely destroyed.

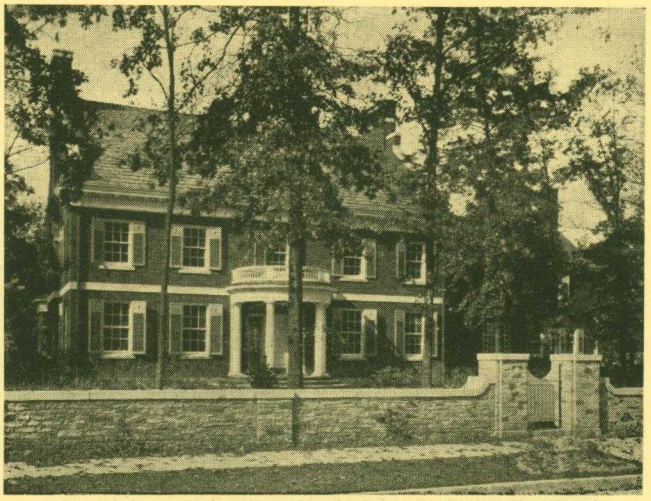
"During the fire, the water and falling timbers sagged the third floor from 6 inches to 4 or 5 feet. The lower floors were also sagged by water, which stood so deep that holes had to be bored in the floors and broken through the metal lath ceilings of all the rooms to drain them.

"The building was without a roof until November, and every rainstorm flooded it from top to basement, the water draining off through the holes mentioned from floor to floor. After the new roof was completed these floors were patched. All the plastering was gone over and many yards had to be removed from the brick side walls. The metal lath ceilings, however, were found perfectly sound except where the lath was actually broken through. They were merely patched up and are still in use today.

"As these ceilings were alternately wet and dried for seven months, I consider this a remarkable test of not only the lath but the clinch. The clinches were still sound where I could get at them to test them even refusing to be broken off with a hammer where the plumbers and electricians had to cut new holes."

Other Fires Thwarted

The new home of Mr. J. W. Packard of Warren, Ohio, escaped destruction while being built. A lighted cigar dropped in a waste basket in an upper room by a workman started a blaze during a week-end vacancy that burned away a large part of the floor, but got no further than the single room, because of the Bostwick "Truss-Loop" Metal Lath below and around the blaze.



Residence of J. Ward Packard, Warren, Ohio—one of the developers of the Packard car. This home was saved from fire by Bostwick Lath.

A letter from architects McCoy & Skadden, of Danville, Ill., written in 1915, tells of a fire in the Golden Rule Building in that city, and says: "Bostwick Metal Lath was instrumental in confining the fire to the comparatively small area that was consumed. This construction undoubtedly prevented the building from being a total loss. This building was erected from my plans, using the materials mentioned, twenty years ago (1895) and the results found after the fire not only showed the value of metal lath and plaster construction as a fire resistant, but also is an eloquent proof of the permanency of building with Bostwick Metal Lath and plaster.

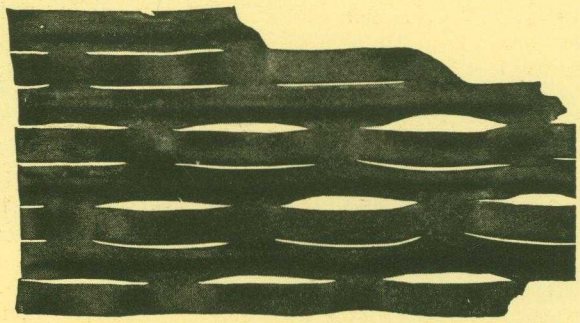
Protecting Exposed Points

Where the desire to save first costs leads to the use of wood lath or other inflammable backing for the plaster, it is still possible to enjoy a considerable measure of fire safety by use of Bostwick Metal Lath at points of greatest fire danger. The recommended treatment is as follows:

1. Fire stops, basket shaped, made of Bostwick Lath and coated with plaster or cement, to be placed between the studs on all bearing partitions. They should be filled with non-combustible material.
2. Bostwick Lath ceilings under inhabited floors, particularly over heating apparatus and coal bins.
3. Bostwick Lath at chimney breasts, around flues and back of kitchen ranges.
4. Bostwick Lath around stair wells and under stair soffits.
5. Bostwick Lath as a base for exterior stucco. See also pages 11 and 12.

U.S. Bureau of Standards Recognizes Bostwick Permanence

A dramatic interest attaches to the Ellington Apartment fire in Cleveland in 1920, although the fire was confined to small space by the lath and easily extinguished. In cutting through a partition, firemen bared a piece of Bostwick "Truss-Loop" Metal Lath and a few specimens were cut off by L. G. Powell, sales manager of the Bostwick Co., and



Specimen of Bostwick Lath removed from Ellington Apartments, Cleveland, W. R. Watterson, Architect, after a fire which it helped to defeat. This sample, in excellent condition after 26 years' service, was filed with Bureau of Standards at Washington in 1920, and contributed to an important decision. Same lath on duty in this building stopped another incipient blaze in 1925. Plaster in good condition today.

Clarence Donley, of Donley Bros. Co., Cleveland, who, in 1894, had helped to erect this lath. The samples were certified by the architect, W. R. Watterson.

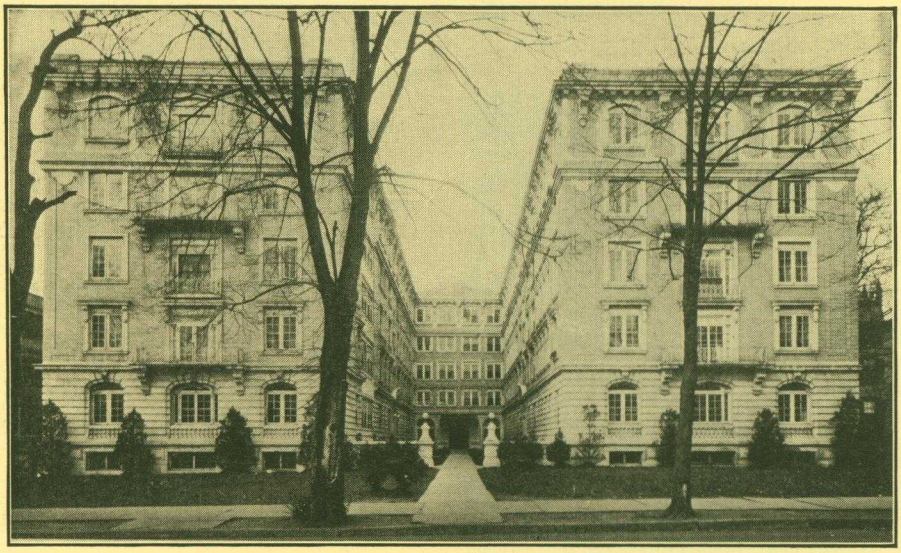
At that time there was pending before the Bureau of Standards at Washington, a proposal sponsored by a rival industry, to require all metal lath to be galvanized after fabrication. The whole metal lath industry rallied to repel this attack upon the permanence of its product. Some of the metal lath companies were too new to furnish definite proof of the lasting qualities of their lath, so it remained for the Bostwick Co., with the longest manufacturing history of all, to provide this evidence. A public hearing was held. After theoretical arguments and laboratory testimony had occupied attention for some time, Mr. Powell arose and offered the certified sample of lath from the Ellington apartments, still bright and new after 26 years, as evidence that galvanizing was not necessary for any but special installations.

On motion, the Bureau of Standards accepted this sample as part of the evidence in the proceeding and it remains on file there today. Incidentally Bostwick Lath has twice stopped incipient fires in the Ellington Block since that date and the plastered walls and ceilings are in excellent condition.

Economy of Long Service

Because it is one of the oldest companies manufacturing metal lath, the Bostwick Co. is singularly qualified to assure builders of the permanent good results which they may expect as evidenced by fine old buildings in which Bostwick "Truss-Loop" Metal Lath has been used.

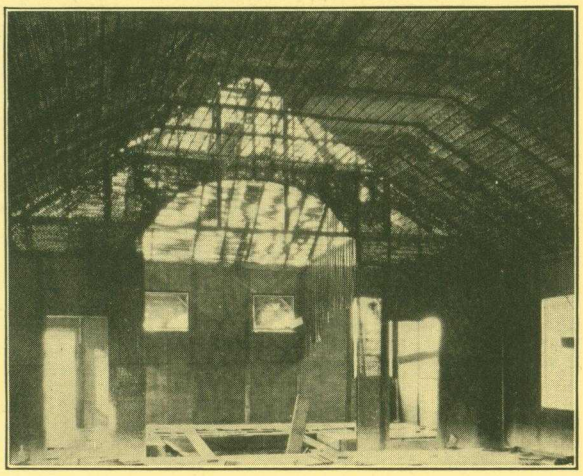
These buildings include the Otis and Telephone buildings, San Francisco (1891), Smith & Freeman, architects; the Catholic Cathedral, Portland, Ore. (1894), L. D Deane, architect; Seattle National Bank, Seattle, Wash. (1895), Doyle & Merriman, architects; The Stock Exchange Building, Chicago (1891), Flanders & Zimmerman, architects; Utica Free Academy, Utica, N. Y. (1898), Bagg & Newkirk, architects.



Jewell Apartments, Hartford, Conn., Nicholas Carabelle, architect. Roof once destroyed by fire, but balance of building was saved by fire resistance of Bostwick "Truss-Loop" Lath.

THE BOSTWICK STEEL LATH CO., NILES, OHIO

Bostwick Economy During Construction



Interior of Seventh Day Adventist Church, Youngstown. Stucco Steel Co., designers and erectors. Bostwick "Truss-Loop" interior, with Bostwick "Truss-V-Rib" used in suspended ceiling also roof and side walls.

BOSTWICK "Truss-Loop" Metal Lath is fabricated from sheet steel without loss of any of the metal and without diminishing the weight per unit of area.

Its fabricated form, with a series of staggered truss loops, alternating with shallower corrugations, has proved remarkably adaptable to the purpose of integral stiffening combined with a most effective plaster key.

This gain in rigidity over other types of metal lath means a more substantial and steadier backing for the plasterer. It also has a certain distinctive structural value through its resistance to stretching such as might be associated with buckling strains upon the supporting members.

Wider Spacing of Supports

The greater rigidity of Bostwick "Truss-Loop" Metal Lath has won it recognition as permitting wider spacing of supports in contrast with other types of metal lath.

In residence construction, studs may be spaced up to 24 inches on centers (subject to load bearing considerations) without subjecting the lath to any "give" during plastering or impairing the strength of the plastered wall under conditions of service.

Where channel iron supports the lath, for ceilings, standard practice calls for 12, 16, and 24-inch spacing. Perhaps the most typical instance of Bostwick economy is the case where ¾-inch channels are specified, 12 inches on centers, and where the choice of Bostwick "Truss-Loop" Metal Lath leads to the use of one-inch channels spaced 16 inches apart.

This is a conservative change, since it offers the same weight of channel per unit of surface. "Truss-Loop" with 16-inch spacing offers a much firmer surface for the plasterer than expanded lath supported every 12 inches. The supporting structure is stronger with the suggested change.

The gain in this instance is in the items of labor and wire. One-third less ties are necessary, even if no account is taken of the item of middle ties, which will be mentioned later.

Under conditions calling for 16-inch spacing of light channels with expanded lath, a similar correction that embraces the use of inch channels with 20 or 24-inch spacing is always justified where the choice of lath falls on Bostwick "Truss-Loop" Metal Lath. Scores of instances might be cited where specifications have been rectified in just this manner.

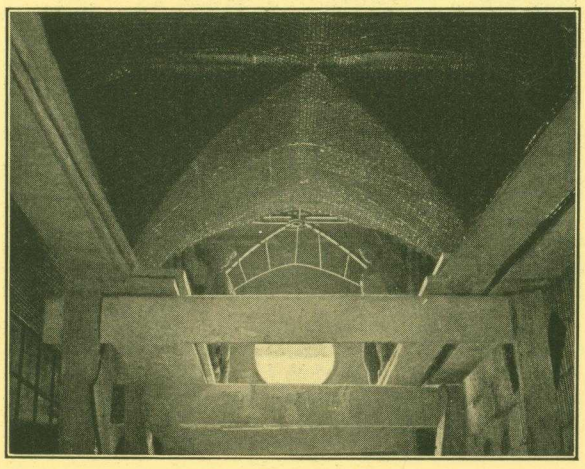
It is not desired to put undue emphasis on non-standard construction. The economy referred to above is not realizable when choice of lath is deferred to the time when contracts are let. If, however, the choice of "Truss-Loop" Lath is determined in advance, this economy of saving unnecessary supports can always be realized. Practical builders familiar with every feature of Bostwick performance frequently follow this practice in development building.

Saving of Overlap

In a like manner, Bostwick "Truss-Loop" Metal Lath offers a saving in effective yardage, because the large overlap specified for other types of Metal Lath is rendered unnecessary by the true, stiff edges of the "Truss-Loop."

Mr. John H. Donnelly, Philadelphia distributor for The Bostwick Steel Lath Co., and a veteran authority on every branch of lathing, says:

"It cannot be made too emphatic that, with Bostwick 'Truss-Loop,' the smallest possible overlap is the best. For side overlap use the nesting rib. For the end overlap, use



School of Architecture, Princeton University. Architects Cram & Ferguson, Boston. Built by The Matthews Construction Co., Princeton. Groined arch ceiling of Bostwick "Truss-Loop" Lath on channel iron frame work.

THE BOSTWICK STEEL LATH CO., NILES, OHIO

just enough surface to insure secure attachment to the support. Excess overlap should be cut off and saved for use in odd spaces. If left projecting across another sheet, it may bend in such a manner as to be difficult to cover adequately with plaster."

The nesting rib referred to is a corrugation running close to the edge of the sheet. When fitted together, these corrugations provide an overlap of about 3/8 of an inch.

Each sheet of "Truss-Loop" is provided along its edges with a nesting rib which fits into the rib of the adjoining sheet with about one-quarter inch overlap and makes a perfectly secure joint.

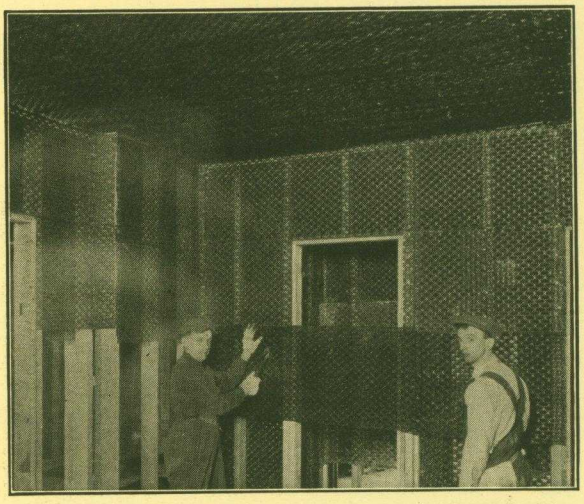
Economy of Erection

Economy is also realized in the erection of Bostwick "Truss-Loop" Lath. Less wire and fewer ties are needed in making the job perfectly secure.

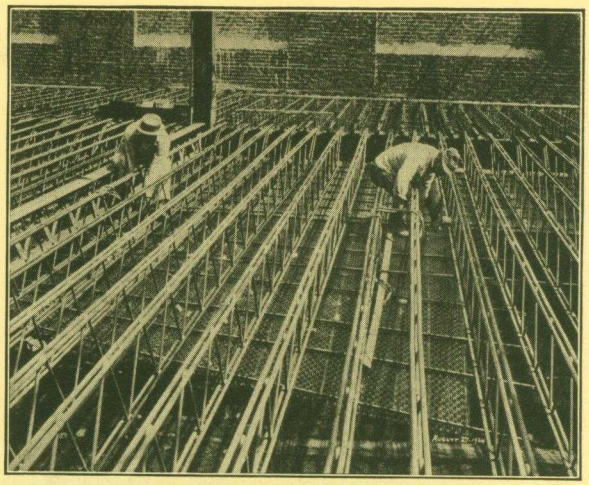
No middle tie between supports, spaced 16 inches, is required where the sheets overlap. The nesting ribs of adjoining sheets insure the rigidity and security of the union and the firmness of the edges under the plasterer's trowel.

John H. Donnelly, who has been previously quoted, also advises that it is entirely feasible to join the ends of contiguous sheets of Bostwick "Truss-Loop" Lath between points of attachment, by nailing the ends of the joining sheets to a short length of studding timber placed back of the joint or by wiring the laps. He says:

The mechanic who has a knack of making every foot of his material count will find 'Truss-Loop' ideal for his purpose. Its stiffness permits the utilization of small strips and odd shapes that would be wasted in the case of a less substantial material."



Bostwick "Truss-Loop" is the ideal installation for widely-spaced supports, in wood or steel construction. Illustration from the Julius Church Apartments, Newark, N. J. Architect, William Lehman. Lathing Contractor, I. Ginsburg. Lath furnished by George F. Perry & Sons, Inc.



Vandergrift Garage, Philadelphia. Fastening Bostwick "Truss-Loop" Lath used as fireproofing for the under side of joists, by the Pawling system, a method accepted by the Philadelphia city building code.

Methods of Erection

Bostwick "Truss-Loop" Lath has commanded preference for more than a generation as the lath to use in connection with wood frame or wood furring, in which case it is nailed to the supporting members with roofing nails, four nails being used for each stud or joist crossed by a sheet of lath. This means 6 nails to 12 nails per yard of material, varying with the spacing of the supports. The nails may be 1¼" flat head roofing nails, 3 penny shingle nails, 3½ or 4 penny barbed wire nails.

It is also remarkably easy to wire to channel iron supports, if the lather will follow the proper method. A neat hairpin bend of wire should be used rather than a long curving loop.

Owing to the long cleft in "Truss-Loop" Lath, the wire can be thrust through it, bend first, and hooked quickly back around the channel and through an adjoining cleft.

Restriction of Plaster Cracks

Where limited use is made of Bostwick Lath to restrict plaster cracking, the recommended points of treatment are:

a. On ceilings of principal rooms.

b. Lap Bostwick lath—either Niles Expanded or Cornerite—four inches around all wall and ceiling angles and around all door bucks.

c. Back of wainscoting and tile mantels.

d. Across plumbing pipes and heat ducts.

Bostwick Economy and the Plasterer

BOSTWICK preference rests upon a broad basis—nothing less than a general superiority in meeting all the requirements of a plaster backing. This superiority is evident in the finished job and becomes increasingly manifest as the test of time becomes more acute.

First, however, it wins the complete approbation of the plasterer, whose work it improves and protects.

The Ideal Plastering Surface

This approval begins with the application of the first trowel of plaster and lasts through to the completion of the work.

"Truss-Loop" being much stiffer than other types of metal lath does not yield nor vibrate under the trowel strokes, but remains firm and true. Plasterers like it and their satisfaction is reflected in more rapid workmanship and better workmanship.

The firmness of the backing helps to minimize the losses of plaster, in contrast with the dropping of plaster that is likely to result when the lath "springs" from release of trowel pressure.

Superiority at Supports

A critical feature of every plastering job is the kind of key obtained over supports, particularly joists and studding. The elevation of the loops makes Bostwick "Truss-Loop" the ideal lath from this point of view.

The same self-furring feature gives "Truss-Loop" a unique usefulness in repairing ceilings where portions of the plaster have cracked, sagged or fallen. It is needless in such a case to remove the rest of the plaster—a job that always fills the house with fine dust and is the despair of the housekeeper.

Instead, cover the remaining plaster with Bostwick "Truss-Loop" Lath, preferably with the loops turned inward, attaching it with six-penny nails to the ceiling joists. Then apply the plaster.

No Losses Between Walls

The saving of plaster wastes is further assisted by the fact that "Truss-Loop" gives the plaster a more continuous backing.

Its openings are calculated to admit only the amount of plaster requisite for key. In case of lath with a more open mesh it not infrequently occurs that excess plaster is forced through the meshes and finds its way to the floor between walls.

This element of loss is not always recognized owing to the fact that the wasted plaster is sealed up from view, but it is there, nevertheless.

The "Truss-Loop" Key

"Truss-Loop" lath affords the plaster a singularly effective key. The plaster passing through the perforations of the lath is strongly keyed at the back.

Besides this, the truss-loops themselves, embedded in the plaster give it an unexcelled anchorage and reinforcement. No other lath offers a strand of such weight or inherent rigidity as this small trussed arch of metal.

THE COMPLETE BUILDING SERVICE

WRIGHT & KREMERS, INC.
ENGINEERS • CONTRACTORS
PINE AND MAIN STREETS • NIAGARA FALLS, N.Y.

July 29, 1924

Bostwick Steel Lath Co.,
Niles, Ohio

Gentlemen:

Replying to your letter of July 8th, wish to advise that on Feb. 2, 1921 we made a test on the amount of plaster necessary for covering different styles of wire and metal lath.

Four panels of equal size were made up approximately 2 feet wide by 54" high. These were tacked together in one frame, stood up on a vertical wall and the four different styles plastered with exactly the same batch of mortar by the same mechanic, going over the four sections simultaneously. We arrived at the following results:

	Lbs. of Plaster
A distinctive wide-expanded lath took	102.93
A typical expanded lath took	92.06
A competitive semi-sheet lath took	79.83
Bostwick "Truss-Loop" took	64.00

Trusting that this will give you the information desired, we are

Yours very Truly,

WRIGHT & KREMERS, INC.

By W. J. Kremers.
Wm. Kremers,
Treas. & Gen. Mgr.

WK:MPD

Facsimile of letter describing comparative test, conducted without knowledge of The Bostwick Steel Lath Co. Names of competing laths have been obliterated for obvious reasons.

Direct Saving of Plaster

Where so specified, "Truss-Loop" makes possible a saving equivalent to the time and material entering into one coat of plaster.

It is customary to apply the brown and finish coats separately, removing and erecting scaffolds. With Bostwick "Truss-Loop" Metal Lath, both scratch and brown coats can be applied from the same scaffold at the same time.

Proportion of the Saving

That this efficient keying is accomplished with minimum waste is a recognized fact wherever "Truss-Loop" is in use. The proportion of saving is indicated in independent tests conducted by Wright & Kremers, engineers and contractors at Niagara Falls, N. Y., February 2, 1921, expressly to determine the amount of plaster necessary for covering different styles of wire and metal lath. Four panels of equal size were made up, approximately 2 feet wide by 54 inches high. These were tacked together in one frame, stood up

on a vertical wall and four different laths plastered with exactly the same batch of mortar by the same mechanic, going over four sections simultaneously with the following results:

A distinctive brand of open mesh lath took 102.93 pounds of plaster.

An ordinary diamond mesh lath took 92.06 pounds.

A semi-sheet lath took 79.83 pounds.

Bostwick "Truss-Loop" took 64 pounds.

This test was made by Wright & Kremers on their own responsibility and not reported to us at the time. Bostwick got the order, but it was not until three years later that we accidentally learned of the test and were furnished with a letter describing the results.

Cincinnati Hospital Comparison

Another unbiased test, made by a contractor for his own satisfaction, was recorded on the corridor ceiling of the Cincinnati General Hospital, November 19, 1908.

The work was suspended ceilings on one-inch channels, 16 inches on centers, plastered with King's Windsor Cement. The corridor was 124 feet long and 8 feet wide, amounting to 110 square yards. The south half was lathed with Bostwick "Truss-Loop" and the north half with expanded metal lath.

The following cost figures, while obsolete from the standpoint of price units, still afford a fair relative comparison:

SOUTH HALF

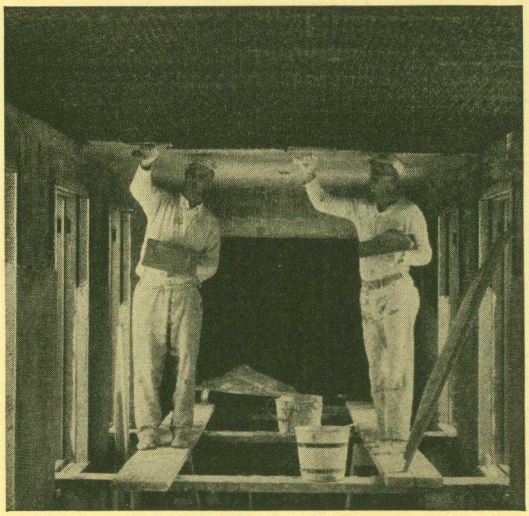
Lathed with Bostwick "Truss-Loop" Lath

2 Plasterers 2¼ hours each—4½ hours at 62½ cents	$2.85
1 Tender 2¼ hours at 40 cents	.90
813 lbs. Kings Windsor at $12.00 per ton	4.87
16 cu. ft. Sand at 5½ cents per foot	.88
55 yards on "Bostwick" cost	9.50
1 yard on "Bostwick" cost	.18

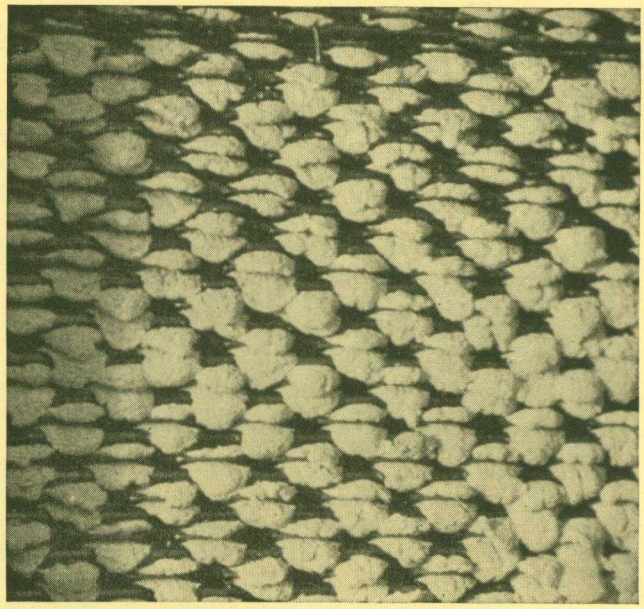
NORTH HALF

Lathed with Expanded Metal Lath

2 Plasterers 5¼ hours each—10½ hours at 62½ cents	$ 6.55
1 Tender 5¼ hours at 40 cents	2.10
1,188 lbs. King Windsor at $12.00 per ton	7.13
25 cu. ft. Sand at 5½ cents per foot	1.37
55 yards on Expanded Metal Cost	17.15
1 yard on Expanded Metal Cost	.31 1/5



Plastering a ceiling over Bostwick "Truss-Loop" Lath in the Reid Memorial Hospital, Richmond, Ind. Architect Walter Sholer, Lafayette, Ind. General Contractor Harry E. Pinnick, Plastering Contractor, John Steinkamp. Bostwick materials furnished by the Tiger Coal & Supply Co., Richmond.



Reverse side of Bostwick "Truss-Loop" Lath, showing how plaster is keyed.

Difference in favor of "Bostwick," 13 1/5 cents per yard.
Weight of Mortar on "Bostwick" is 44 pounds to Square Yard.
Weight of Mortar on Expanded is 67 pounds to Square Yard.

Based on present-day costs, the same contractor who made the above tests states that the saving now is more than 20 cents a square yard in favor of Bostwick.

J. F. PARSONS — WM. H. ELLIS

PARSONS & ELLIS

CONTRACTING — PLASTERERS

TELEPHONE 3627

Binghamton, New York August 20 1924.

The Bostwick Steel Lath Co.,
Niles, Ohio.

Gentlemen:

Inclosed is a record of Test on applying Plaster, brown coat only.

Building-A.T.Lacey, Res. 54 Pennsylvania Ave, City.
Space plastered-Basement Ceiling on wood joists 16"o.c.

Bostwick truss-loop sheet lath.		Competitive semi-sheet lath.	
32yds. Bostwick truss-loop	$ 11.20	22yds. " " " "	$ 6.82
500lbs. Neat Plaster	4.25	450lbs. Neat Plaster	3.82
10 Bu. Sand	2.50	9 Bu. Sand	2.25
3hrs. Plasters Time	4.95	2-3/4 hrs. Plasters Time	4.54
3 " Laborers "	2.59	2-3/4 " Laborers "	2.37
	$ 25.49		$ 19.80

Cost per sq.yd. less labor of Lathing	.796¢
Cost per sq.yd. Less labor of lathing	.90¢

Difference per Sq. Yd. in favor of Bostwick Truss-loop Metal Lath Labor and Material only, cost of lath omitted. .104¢

Covering capacity Truss-loop 6.4 Sq. Yds. to 100 lbs. Neat Plaster.

Covering capacity semi-sheet lath 4.9 Sq. Yds. to 100 lbs Neat Plaster.

Comparing "Truss-Loop" Lath with Wood Lath this test shows that we used slightly more Plaster on "Truss-Loop" than we would have used under ordinary conditions on wood lath.

Yours very truly,

Parsons & Ellis.

Per Wm. H. Ellis.

10.4¢ less per square yard was paid in finished plaster cost with Bostwick "Truss-loop."

4¢ more per square yard was paid for Bostwick "Truss-loop"

6.4¢ per square yard was saved in finished cost with Bostwick "Truss-loop."

Letter describing impartial test of economy between Bostwick "Truss-Loop" Lath and competitive lath. Note difference in yardage which makes total cost of Bostwick portion higher.

THE BOSTWICK STEEL LATH CO., NILES, OHIO

Bostwick in Two-Inch Plaster Partitions

ANY discussion of wall economics would be incomplete without a description of the merits of the so-called plaster partition, sometimes referred to as the Two-Inch Metal Lath Partition.

These partitions consisting of two inches of gypsum hard plaster reinforced by metal lath have proved their worth from the standpoint of rigidity and fire resistance as well as the insulation they offer against heat and sound.

A widely published photograph, taken a few years since, illustrated a four-story elevator shaft, surrounded by a two-inch metal lath partition, which stood alone amid the ashes of a burned business block, the only part of the structure which survived the fire.

Saving in Rentable Space

Office space renting by the square foot, often at a high figure, is notably economized when interior partitions are of the two-inch metal lath type rather than tile partitions, the latter having a thickness, plastered, of 4¼ inches.

The Donley Brothers Company, metal lath erectors in Cleveland, have used the following calculation in advertising this type of construction:

"Every time Two-Inch Metal Lath Partitions are used, rather than tile partitions, you save a strip of floor space 2¼ inches wide. On a $2 per square foot basis (a moderate unit) this means an annual rental of 39 cents gained for each linear foot. If the life of the building is taken as 25 years, 39 cents per year will in that time amortize the sum of $5 with interest at 6 per cent. Thus there is an increase of $5 in the capital value of the building for each linear foot of partition."

In Residence Construction

Not only in business buildings, but in a large class of residence construction, such partitions have a useful place, in fact, anywhere that the partition is freed from a load-bearing function.

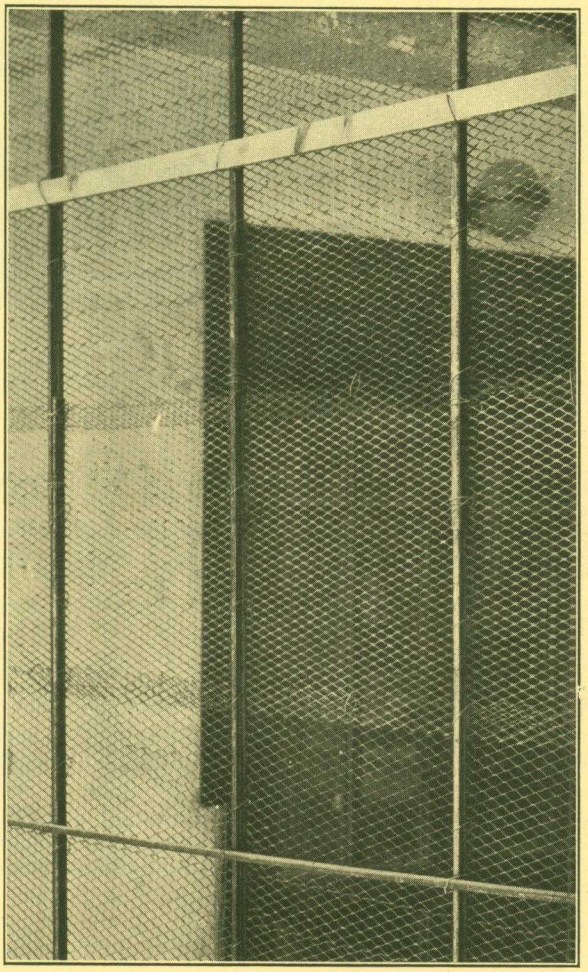
Compared with the ordinary double, wood lath and plaster partition, the two-inch partitions have the advantage of resisting the spread of fire, they have no "between wall" space for the secret entrapment of flames. Channels cost less than studs and are more easily erected. One application of lath suffices, instead of two, saving half the material and labor. Plastering costs no more, perhaps less than in the case of double construction. Embedded conduits carry electric wires, and heating pipes are enclosed in neat pilasters.

Features to be Avoided

Where such partitions have proven unsatisfactory, two reasons are chiefly to be blamed.

The anchor channel should be screwed to the door buck, not nailed. Where it is nailed, the slamming of doors tends to start the nails and permits cracking away from the door frame.

Skimping of the thickness of the partition sometimes results from making it conform to a planed 2x4 door buck, which may be scarcely 1¾ inches thick. The plaster partition must be a full two inches thick.



Detail of plaster partition, showing splicing of channels, temporary bracing and permanent bracing below line of wainscot.

Typical Construction

The recommended construction for Two-Inch Metal Lath Partitions consists of ¾-inch channel irons, spaced 12 inches on centers with Bostwick 2.2 pound Niles Expanded Metal Lath wired to it. With plaster of ¾-inch grounds over the face of the lath, the channels are embedded a minimum of ⅜ of an inch at the back while the depth at the back, between supports, exceeds an inch from the face of the plaster to the embedded lath.

Note: For partitions over 10 feet high, use 1-inch channels spaced 12 inches on center.

"Truss-V-Rib" Construction

As an alternate form of construction, some builders have reported excellent results with Bostwick Truss-V-Rib, erected vertically without channel supports, the heavy ¾-inch rib of the lath itself affording the support for the partition.

This construction affords an excellent and substantial partition. In certain localities, particularly away from the larger centers of population, it is sometimes easier to find men who can nail Truss-V-Rib to the floor and ceiling supports (nesting the side ribs) than it is to find men familiar with the erection of channel iron and wiring of metal lath.

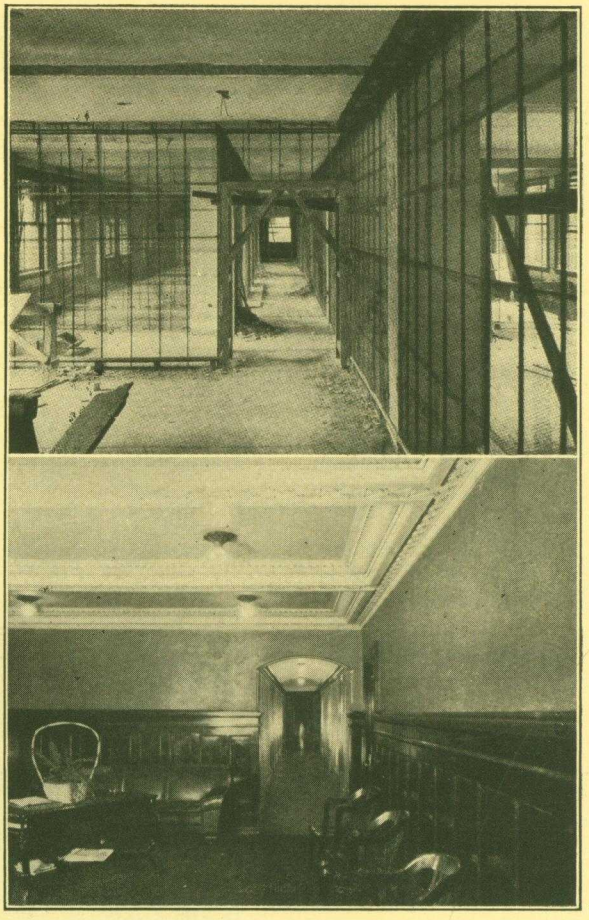
One characteristic advantage of "Truss-Loop" lath, saving of plaster, can play no part in two-inch solid partition construction, since the lath is plastered on both sides.

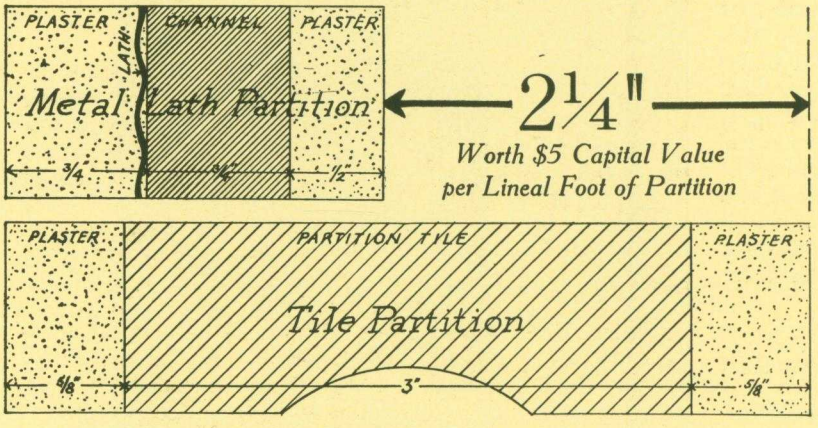
Reason for the Recommendation

If equally skilled labor is available for either operation, the advantage of economy is on the side of the construction first described—Niles Expanded Lath with channel supports as the following calculation will show based on costs in north central states in March, 1925.

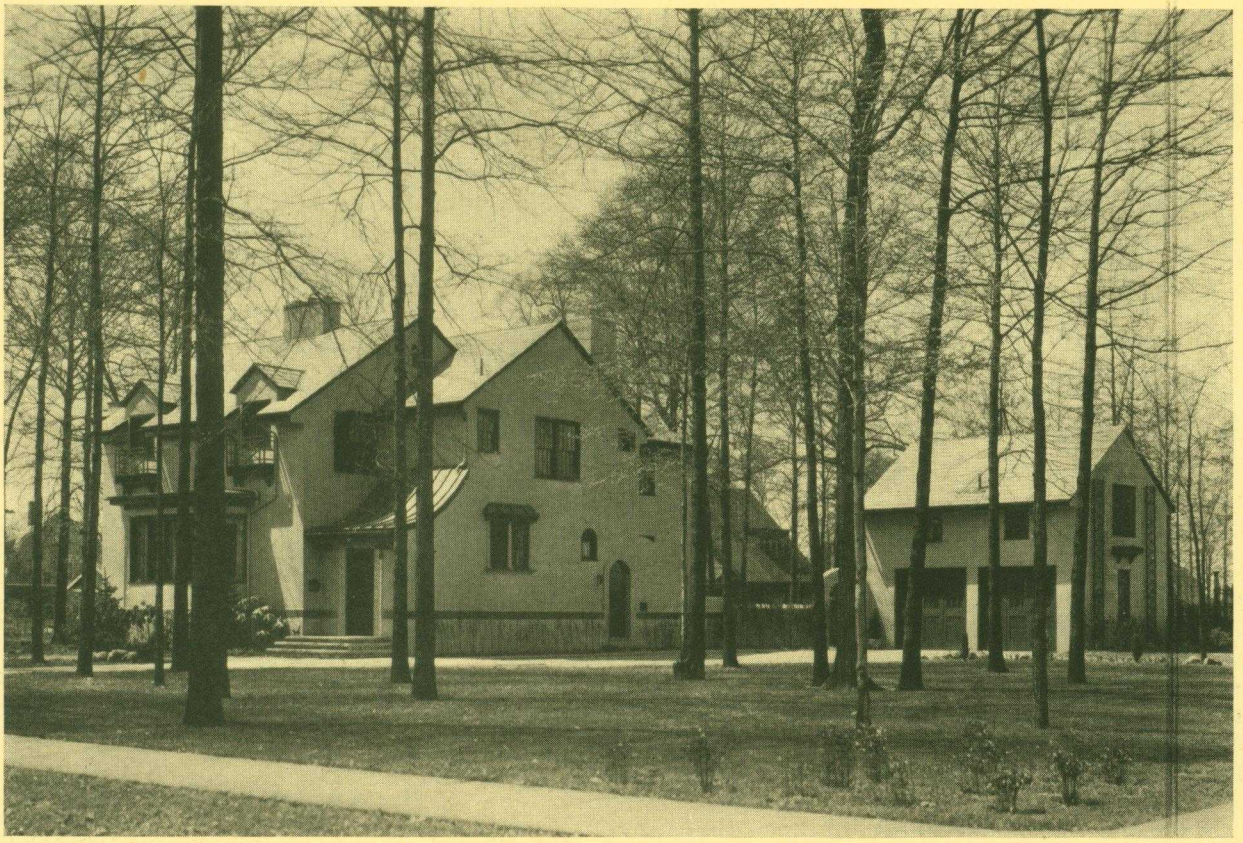
One yard of 2.2 lbs. Niles Expanded Lath would cost 19 cents, ten lineal feet of ¾-inch channel would cost 16 cents. With one cent allowed for tie wire, there would be a material cost of 36 cents for the recommended construction, while a square yard of Truss-V-Rib costs 55 cents, or 19 cents more.

Film Exchange Building, Cleveland. John H. Graham, Architect. Contractors, Wm. Dunbar Co. From identical positions, these photographs show metal lath in position for 2-inch plaster partition, also the finished rooms.





Comparing diagram used by Donley Bros. Co., of Cleveland, in illustrating the advantage to building owners from using 2-inch plaster partitions. The saving of floor space on the basis of a $2 unit rental per square foot and a 25-year life to the building, amounts to a capital value of $5 per lineal foot of partition.



Harbor Little House, Warren, Ohio, Stucco over Bostwick Metal Lath, galvanized.

Bostwick and Stucco Exteriors

STUCCO exteriors have earned popularity, both by their inherent beauty and their conformity to historical precedent, which fits them to period treatments. The rapidly increasing vogue for Spanish design, especially in home architecture, is sure to bring even greater attention to stucco construction, since much of the fine, early Spanish architecture is executed in this manner.

Necessity of Rigid Support

The only retarding factor that interferes with a much larger use of stucco is due to instances of cracking, numerous enough to create hesitancy among owners who do not always analyze the causes.

Aside from the possibility of settling in the entire structure, the prevalent cause of cracking is the practice of applying the stucco over wood lath or other supports which expand or shrink in response to changes in moisture or dryness.

Exposed to the weather as it is, any flaw in a stucco job presents the possibility of admitting water to contact with the supporting lath. If it is a metal lath, the damage is minimized and, as a rule, easily repaired. But if the backing is such as to absorb moisture, the trouble may ramify in many directions from the starting point and lead to ugly patching or the resurfacing of large spaces.

Bostwick and Stucco Work

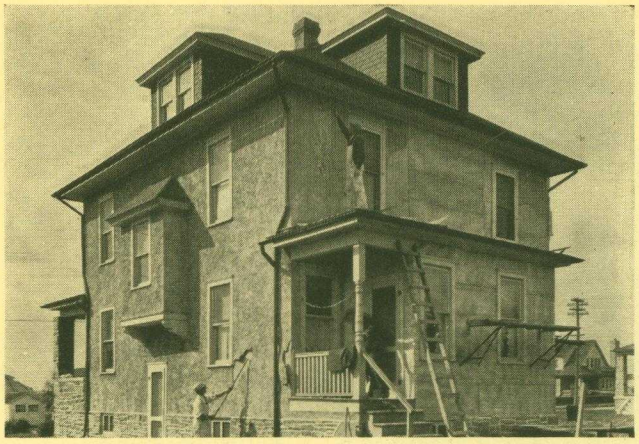
Bostwick Laths bring into the stucco field the same substantial merits that give them preference for quality interiors.

The type of lath to be used will vary with the nature of the job. In new construction, where lath is applied to furring strips over sheathing, there is a widespread preference for Niles Expanded Lath, galvanized.

Bostwick "Truss-Loop" Lath, 5¼ lb., galvanized, also has many advocates in the stucco field. It offers a compensating advantage for its greater first cost in the fact that it can be applied, loops inward, directly to the sheathing and thus obviate the need of furring strips. It also offers a more definite resistance to strains caused by the drying out of the supporting members.

The self-furring advantage is present, too, on our "Lock" Corrugated Lath and at a saving of first cost. The 3.4 pound lath, galvanized, is recommended for this character of work.

THE BOSTWICK STEEL LATH CO., NILES, OHIO



House at Oakmont, Pa., where stucco failed to adhere to wall board. Stucco was removed and Bostwick "Truss-Loop" Lath applied, loops inward, against the wall board for a new application of stucco.

The plaster-saving merits that have made Bostwick "Truss-Loop" Lath a favorite in interior construction do not always appeal with the same force in stucco work, especially where it is desired to have a definite thickness of stucco, for purposes of weather resistance. Snug contact between stucco and sheathing is also sometimes desired, hence a preponderating preference for Bostwick Expanded types.

For Remodeling Exteriors

Bostwick Lath and stucco have a widespread use in remodeling exteriors of old buildings. A favorite dwelling will often gain many decades of usefulness in this way and look better in its old age than it did when new.

It is not necessary to remove the old siding. No matter how impaired, it offers a large degree of added protection against chill. Neither is it desirable to furr over the siding.

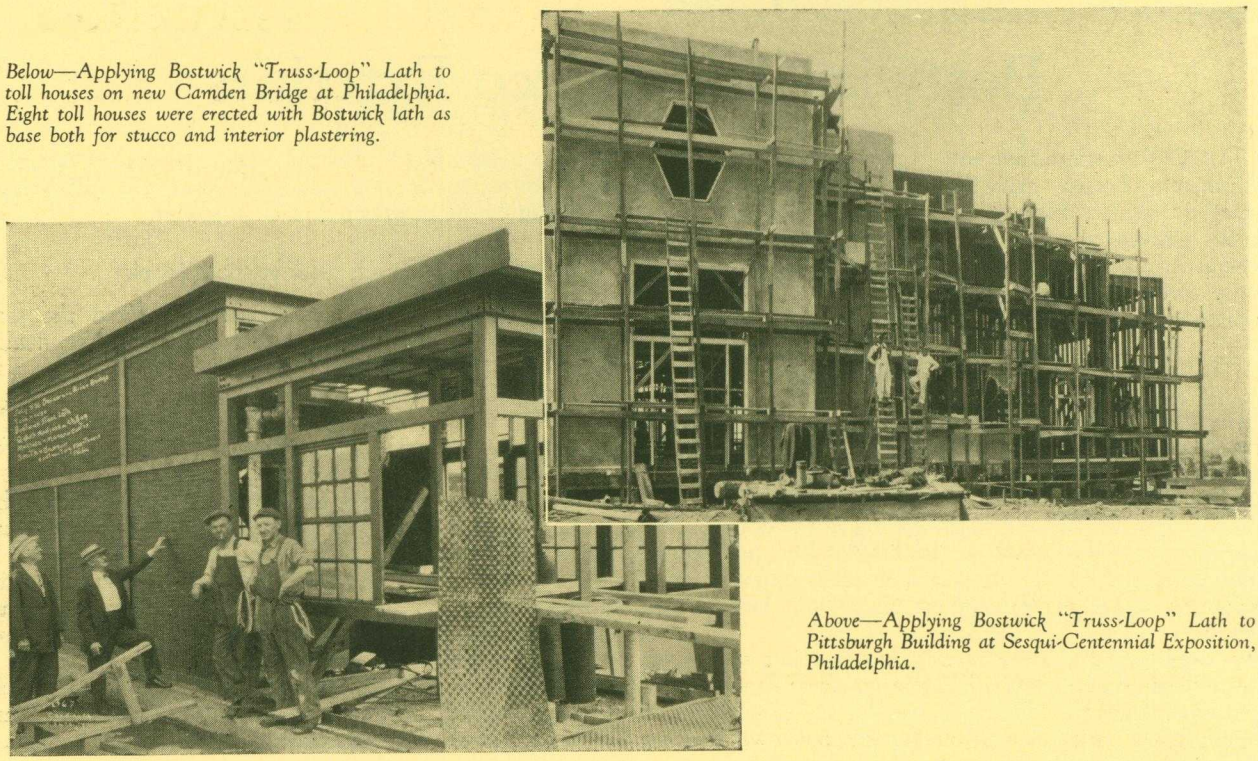
The recommended practice, and one followed in scores of instances with success, is to apply Bostwick "Truss-Loop" Metal Lath, galvanized, loops inward.

In many instances the stucco can be applied with the door and window frames as a ground. In other instances the frames must be built out to conform to the thickness of the stucco.

Use of Furring Nail

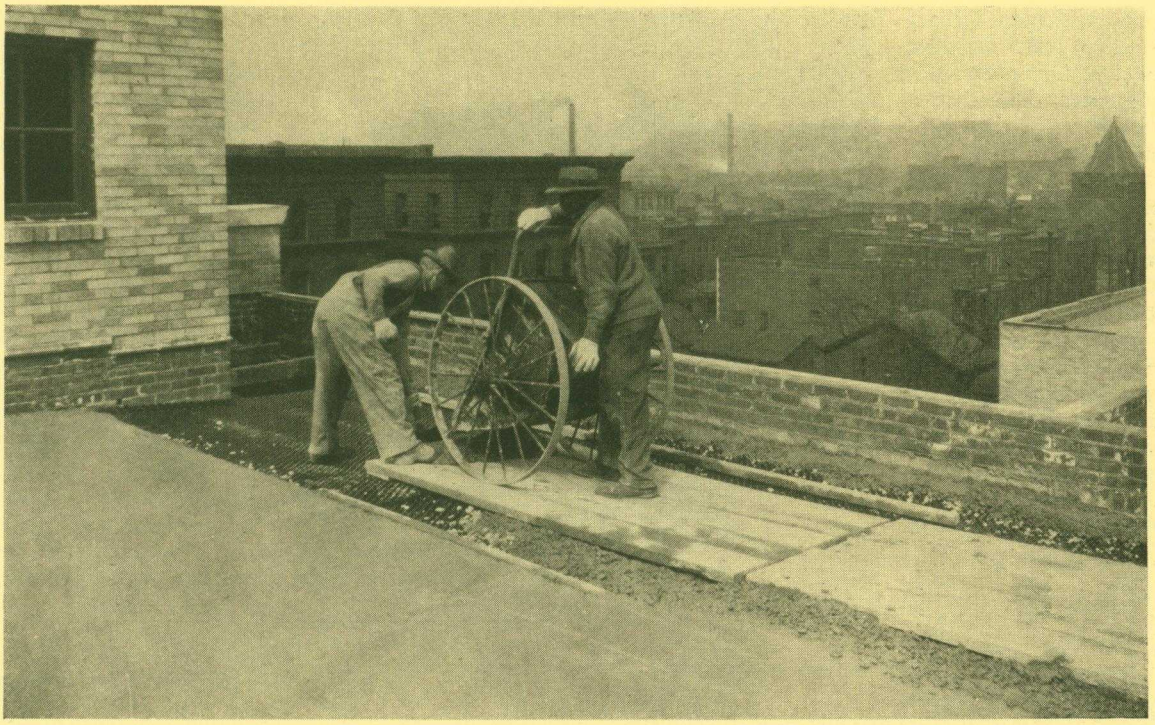
Perhaps the most satisfactory of the newer materials for stucco reinforcement over sheathing is Bostwick Stucco-Metal, an expanded lath with an unusually large mesh, 1½ x 3 inches, applied with a furring nail. This nail has a double flanged head which holds the lath and another flange ⅜-inch from the head. Driven into the sheathing, it holds the lath a uniform distance from the backing, affording an efficient centering and reinforcement in this class of work. It is not so well adapted for back plastered jobs, on account of its unusually large mesh.

Below—Applying Bostwick "Truss-Loop" Lath to toll houses on new Camden Bridge at Philadelphia. Eight toll houses were erected with Bostwick lath as base both for stucco and interior plastering.



Above—Applying Bostwick "Truss-Loop" Lath to Pittsburgh Building at Sesqui-Centennial Exposition, Philadelphia.

THE BOSTWICK STEEL LATH CO., NILES, OHIO



North Side Y. M. C. A., Pittsburgh. Architect, R. Maurice Trimble; Engineer, C. G. Dunnells. General Contractors, Pittsburgh Engineering & Construction Co. Shows method of laying wood platform for the concrete buggy and pouring of concrete over Bostwick "Truss-Loop" Lath, on J. & L. junior beam.

Bostwick in Floor and Roof Construction

CONCRETE floors with metal lath reinforcement, constructed without forms, represent an accepted form of construction in most localities. The floors are laid without forms, the concrete being applied to the metal lath which is spaced over steel beam, metal lumber or bar joist supports.

Such floors offer an advantage of lightness with rigidity, combined with low construction costs since no forms are required, the lath supporting the green concrete during the period of setting.

The difficulties presented are chiefly two. (1) Sagging from use of too light a lath. This is wasteful of concrete, since, in order to maintain a minimum of two inches of concrete over the supports, there will sometimes be a depth of 4 or 5 inches between supports. (2) Excessive dripping of the green concrete.

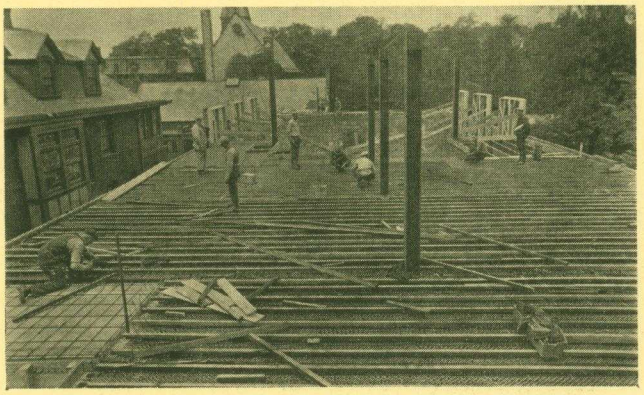
Two Rib Laths Offered

Bostwick "Truss-V-Rib" represents the maximum specifications for rigidity and service in this field. It is identical with "Truss-Loop" Lath, except that it has three-quarter-inch corrugations, spaced seven inches apart, four corrugations to the sheet.

For lighter and more general requirements we offer Bostwick 3/8-Inch Rib Expanded Lath, a standard product, thoroughly dependable within its scope.

"Truss-Loop" as Floor Lath

Bostwick "Truss-Loop" Metal Lath, while not a rib lath,



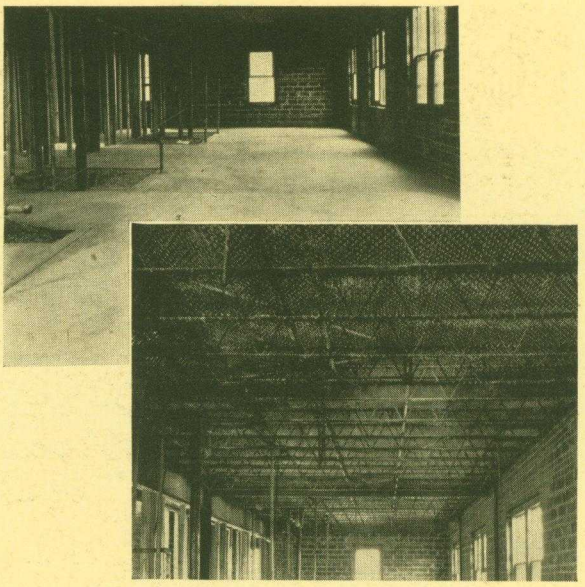
Truss-V-Rib floor reinforcement over J and L Junior Beams, showing nailing strips, on St. Paul's Parish House construction, Erie, Pa. Architects Meyers & Johnson; Contractors H. Platt & Co.; Bostwick materials furnished by O. C. Thayer & Son.

THE BOSTWICK STEEL LATH CO., NILES, OHIO

is winning widespread recognition as a floor lath. Its truss-loop construction gives it a rigidity greater than that of any rib laths except those with three-quarter-inch ribs.

This improves the load-bearing performance and makes easier handling on the job.

Its more nearly continuous sheet formation saves seepage of grout from the wet concrete. This is important not only in the saving of material but in conserving the strength of the floor, since the thin grout that seeps away represents the richest part of the concrete.



Floor operation over Bostwick Truss-Loop Lath in Makepeace Building, Sanford, N. C. Above, finished concrete floor. Below, under side of lath, after pouring. Massillon Bar Joist used.

Test at Carnegie Institute

A test of Bostwick "Truss-Loop" Lath as floor lath supported on 2′ 0″ centers in a 2″ concrete slab was made at Carnegie Institute, Pittsburgh, and reported in a letter of August 17, 1925, signed by Clifford G. Dunnells, head of the department of Building Construction. He writes:

"The mix used was one part cement, two parts sand and four parts ¾-inch gravel. A somewhat wet mix was used, more water being used than should be added to secure a concrete of greatest strength. But although this wet mixture was used, comparatively little material came through the openings of the lath during the pouring of the slab.

"No particular refinement was used in selecting the fine and coarse aggregate. A standard brand of cement taken at random from the bins was used. The test was made on three slabs loaded simultaneously and uniformly.

"The load was gradually applied until it reached 1,200 pounds per square foot, this load being far beyond any reasonable requirements of the slab. The test was stopped at this point owing to the difficulty of loading.

"After the load was removed, the slab was examined carefully for cracks, or slipping of the lath, and as far as could be observed, the slab and supporting lath appeared to be in excellent condition."

Triumph of "Truss-V-Rib"

Bostwick "Truss-V-Rib" reinforcement won a convincing and spectacular triumph recently at a competitive test before engineers in Mexico City. The prize was an order of a half million square feet of floor and roof material in the Modelo Brewery of that city.

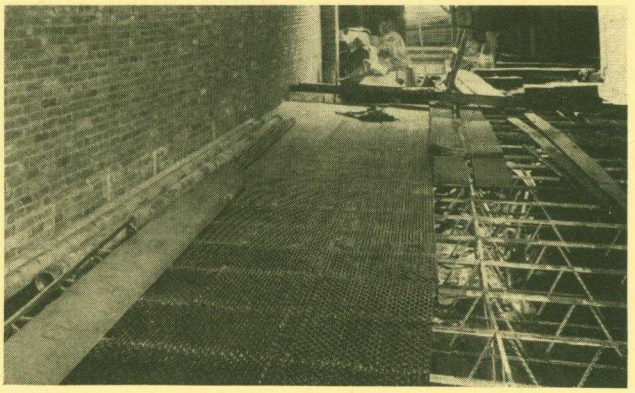
The test was held at the instance of Senor Gabriel Robles Dominguez, Mexican distributor for Bostwick products. The order was all but placed for a rival material when he demanded a chance to show what "Truss-V-Rib" could do in competition with the other material.

Slabs of 1-2-4 concrete mixture were prepared on the rival laths, each 45 millimeters (1.77 inches) thick and allowed to stand 11 days. Supported on centers 1.69 meters apart (66½ inches), sacks of cement were loaded upon them. At 100 pounds per square foot, "Truss-V-Rib" had a deflection of 2½ millimeters and the rival slab 10 millimeters. The rival slab failed at 160 pounds per square foot and remained buckled after unloading. The "Truss-V-Rib" slab was loaded to 300 pounds per square foot without rupture and when the load was removed it returned within one millimeter of horizontal. The official report is signed by Carlos Crombe, supervising engineer. The rival product was represented by three staff men who went to Mexico City to witness the test.

Bostwick in Roof Slabs

Roof slab construction offers a problem similar to that of concrete floor construction. The stresses are somewhat different. Instead of the relatively fixed load of equipment and furniture which floors must withstand, the roof must resist such variable stresses as snow load and wind pressure.

The importance of these two kinds of stresses are reciprocal, in a general way, depending on the pitch of the roof. With a relatively flat roof, the snow load is the important factor, while an increase in the pitch minimizes snow pressure and increases wind pressure. Roof failures, from either cause, are nearly always tragic, an instance being the collapse of a roof over a moving picture theatre in Washington, a few years since, where scores of lives were lost. The importance of a high factor of safety and extreme care in the selection of materials is apparent when the uncertainties of the elements are to be guarded against.



Example of Bostwick Truss-Loop Lath over Rivet Grip Joist in the Sultzer Bldg., Fifth Avenue, Pittsburgh. Sharowe & Friedman, Architects.

THE BOSTWICK STEEL LATH CO., NILES, OHIO

In the illustration below is shown a portion of the roof of the Masonic Temple, Lakewood, Ohio, with the Bostwick "Truss-V-Rib" in place, ready for the pouring of concrete.

In discussing the choice of material for this fine building, General Contractor J. W. Chrisford says: "The important advantage of this lath is that it retains more of the concrete than an expanded lath. I have seen a roof installation that was partly Bostwick 'Truss-V-Rib' and partly a rib-expanded lath. The difference in the quantity of grout that came through to the floor below was a striking argument in favor of Bostwick 'Truss-V-Rib.'

"It should be borne in mind, too, that the concrete which adheres to the under side of the lath has little or no structural resistance. The place for the concrete is above the lath. Back plastering, which is usually necessary with any type of lath, will provide the needed protection to the reinforcing.

"The heavy rib of Bostwick 'Truss-V-Rib' necessitates less shoring and its freedom from sagging saves concrete."

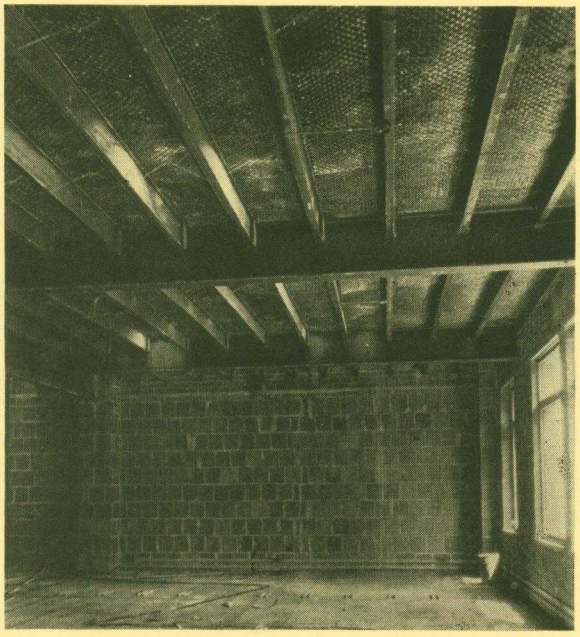
As steel loses 30 per cent of its structural strength at 200 degrees Fahrenheit, and all of its strength at the comparatively low temperature of 600 degrees, the fireproofing of fabricated steel pillars becomes an important function of metal lath and plaster.

Encasement of the steel in unreinforced concrete is not enough, since the concrete spalls under severe heat. A much more efficient protection is provided by the encircling of the column with Bostwick "Truss-Loop" Metal Lath, plastered with a hard plaster or one of several special fire-resisting plasters. There is the additional advantage that the column may be built out in any desired ornamental form.

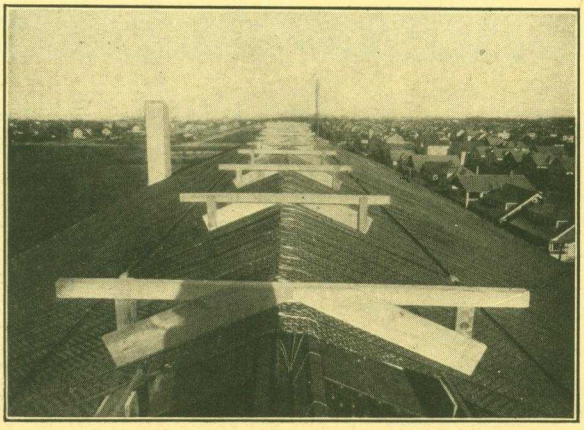
In some cases, the lath is treated as a form and filled with concrete, but more often the space is left unfilled, dead air having a definite insulating value.

The principal strain to be anticipated is that of a powerful stream of water from a fire hose. Occasionally such a stream will rip a light or poorly-secured lath from its fastenings.

Proper anchorage of vertical channels to the steel member is of prime importance and certainly cannot be overstressed. Bostwick "Truss-Loop" Metal Lath, on account of its superior rigidity, should command preference for this work.



Under Side of Bostwick "Truss-Loop" Lath on J and L Junior Beams in Steinbach and Jubilier Bldg., Pittsburgh. Hannah & Sterling, Architects; Shultz, Schreiner & Clyde, Contractors. Showing small deflection after pouring three inches of concrete.



Masonic Temple, Lakewood, Ohio. J. W. Chrisford, Designer and Builder. Showing application of Bostwick "Truss-V-Rib" preparatory to applying concrete to roof.

Comparative Test in Rochester

An interesting comparison of Bostwick "Truss-Loop" Lath with Bostwick 3/8-Inch Rib Expanded Lath was made in a floor lath operation recently by Contractor Werner Spitz of Rochester, N. Y., who discusses the results in a letter to the Bostwick Co. His only adverse finding on "Truss-Loop" was a 25 per cent greater application cost due, he thinks, to his use of softwood wedges, where hardwood wedges should have been used. He adds:

"I further found that the deflection between joists was approximately the same when no extra weight, other than the concrete had been placed upon the lath, but I did find that the men could walk upon the Bostwick 'Truss-Loop' Lath regardless of whether they were stepping on a joist or in the middle of a span without damaging same, which of course is not true in the case of 3/8-Inch Rib Lath, as when the rib lath has once been broken or sagged it is very difficult to keep it up without additional care or support.

"Regarding the additional labor cost of applying 'Truss-Loop' Lath to joists; as this is a very small item, I find that the fact that the men can walk regardless of whether they are on joists or not, does reduce the labor cost of placing concrete sufficiently to overcome the additional cost of applying Bostwick 'Truss-Loop' Lath to the joists.

Reduces Seepage 75 Per Cent

"Regarding the matter of the seepage of the grout in the concrete: I find that the seepage from the Bostwick 'Truss-Loop' Lath is not more than 25 per cent of the amount of seepage from the rib lath which, in my opinion, is worthy

of consideration when the contractor is pouring his slabs from the first floor up as there is very little waste to clean up and scrape off the first floors.

"These tests were made over an area of approximately 250 square feet on each type of lath, giving a pretty comprehensive idea of the comparative cost."

A FEW INSTALLATIONS

The following installations of Bostwick "Truss-Loop" lath in floor and roof construction may be cited:

Over Pressed Steel

Weston High School, Weston, W. Va. Architect, Ed. J. Woods & Sons, Clarksburg.

Fairmont Wall Plaster Co., Fairmont, W. Va. Architect, Burchinel, Fairmont.

Dr. Loose's Dispensary, Huntington, W. Va. Architect, R. T. Willett, Huntington.

High School, Bluefield, W. Va. Architect, Garrey & Sheffey, Bluefield.

West Virginia Insane Asylum, Huntington, W. Va.

Over Rivet Grip

Oak Hill High School, Oak Hill, W. Va. Architect, Frampton & Bowers, Huntington, W. Va.

Church at Ashland, Ky. Architect, Wysong & Bengsten, Charleston

Over Massillon Joist

Bigley School, Charleston, W. Va. Architect, Warne, Tucker & Patterson, Charleston.

Truslow School, Charleston, W. Va. Architect, Warne, Tucker & Patterson, Charleston.

West Side Junior High School, Charleston, W. Va. Architect, Warne, Tucker & Patterson, Charleston.

St. Marys Court House, St. Marys, W. Va. Architect, Hamboe & Pogue, Clarksburg.

Ritchie School, Wheeling, W. Va. Architect, Chas. F. Bates, Wheeling.

German Lutheran Church, Pittsburgh, Pa. Architect, Henry Hornbostel, Pittsburgh, Pa.

Over Jones & Laughlin Junior Beam

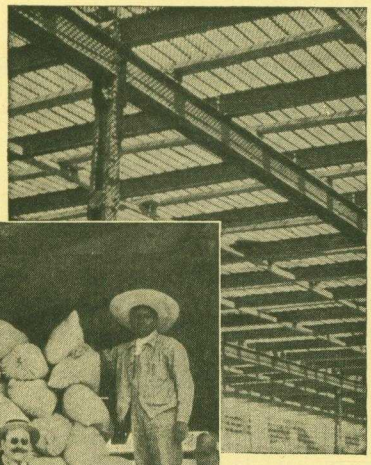
King Edward Apartment Add., Pittsburgh, Pa. Architect.

North Side Y. M. C. A., Pittsburgh, Pa. Architect, Maurice Trimble, Pittsburgh, Pa.

Blaw Knox Office, Blaw Knox, Pa. Architect, Hunting, Davis & Dunnells, Pittsburgh, Pa.

Stienbach & Jubulier Bldg., Pittsburgh, Pa. Architect, Hannah & Sterling, Pittsburgh, Pa.

Jefferson County Court House, Brookville, Pa. Architect, Emmett Bailey, Oil City, Pa.



Bostwick "Truss-V-Rib" used in roof and floor construction of Modelo Brewery, Mexico City.

Test slab constructed on Bostwick "Truss-V-Rib" supporting a load of 300 pounds per square foot, between centers 6½ feet apart.

Scene in Mexico City following the destruction of a four story brick building by a 26 minute shock of earthquake. The adjoining building, marked X, was a new structure with floor slab construction over Bostwick "Truss-Loop" Lath and the same material used as plaster base. In spite of the long earthquake shock and the impact of a falling building next to it, the building with Bostwick construction was unimpaired.

THE BOSTWICK STEEL LATH CO., NILES, OHIO

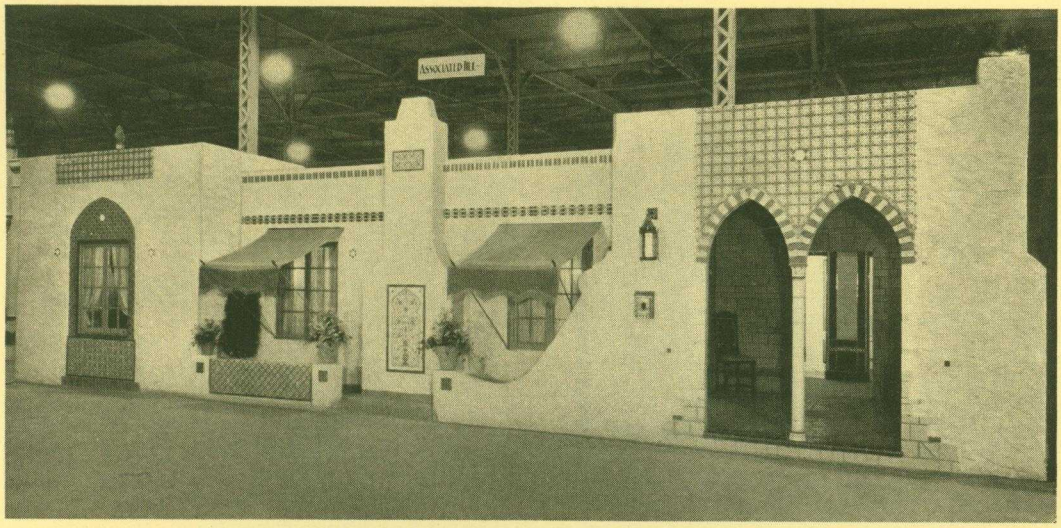


Exhibit of the Associated Tile Manufacturers of America at the Sesqui-Centennial. All interior plaster and tile work over Bostwick "Truss-Loop" Metal Lath.

Bostwick in Tile Construction

THE rigidity and all-round worth of Bostwick "Truss-Loop" Lath have made it a favorite with expert tile setters. This preference has come with a minimum of sales effort, but there is no field in which Bostwick recognition is more nearly universal.

An instance of this outspoken preference comes in the form of a letter from Clarence W. McCaulley, president of the Tile and Mantel Contractors Association of America, who writes of his "desire to advise that it is the opinion of the writer, who has had many years experience in the plastering and tile business, as well as a few years as executive of The Tile & Mantel Contractors Association that the 'Truss-Loop" Metal Lath is the best back for tile on wood construction that is manufactured in this country; and I would go on record as recommending this lath to all architects and owners who desire a high class, permanent installation of tiles."

Lath used in the backing of tile must meet two requirements of more than ordinary severity: (1) the impact of driving tiles into place during installation, (2) the burden of the tiles during the period of service.

Calls for Maximum Safeguards

Not only in the choice of lath, but in the technique of application, the tile setter must observe the highest standards of rigidity and security, since any structural fault or failure in the reinforcement may manifest itself in tile cracks.

The tile itself, while a material of considerable inherent strength, is too brittle to adjust itself to such strains as may be communicated to it. Hence all possible care must be used in eliminating possible future stresses when the job is first done. Attention to the quality and seasoning of studs and joists in the portion of a building that is to be tiled is a good precaution. Studs should be spaced not more than 16 inches and most good tile appliers use more and larger nails in applying their lath than is called for in plaster backing.

Care in Lapping Lath

The corners of a tiled room are always a critical point in tile work, as the tile itself almost invariably presents an unbroken joint in the corner. Consequently the lapping of lath around the corners is a matter of prime importance.

The general rule with Bostwick "Truss-Loop" Lath is that the least overlap is the best. Its rigidity permits minimum overlap. The elevation of its loops is such that the lapping of one loop over another may cause it to impinge upon the surface of a light application of plaster.

However, in tile work, this rule should be modified on the side of maximum security for tile backing. There should be enough overlap, enough nails and enough ties to be sure that flaws do not arise from faulty reinforcement.

Application of the Tile

A 3/8-inch scratch coat of Portland cement and sand is usually applied first, followed by the adhesive coat, which may be variously compounded, but usually contains Portland cement and lime.

Two methods of applying in general use are (1) floating and (2) buttering. In the former, the adhesive cement is spread over a considerable extent and the tile forcibly applied to its surface, being driven into a uniform ground.

Applying tile in an Ohio bathroom by the Bertolini Tile Co., Youngstown, Ohio.

In the case of buttering, each tile is covered with cement and forced into place separately. Pointing of the joints follows in either case.

Importance of Rigidity

While the scratch coat has taken its initial set before the tile is applied, the rigidity of the reinforcement is an important factor in keeping the scratch coat intact during the driving process that brings the tile to a true surface. Light, flexible reinforcement is not nearly so efficacious as Bostwick "Truss-Loop" Lath with its integral stiffening.

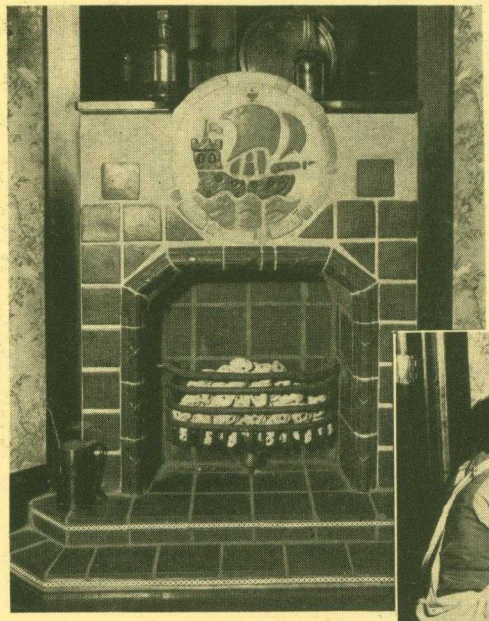
The usual minimum ground for a tile application is 1¼ inches, of which ¾ inch is cement and the balance represents the thickness of the tile. In cases of heavier grades of tile, the total ground is proportionately greater. The need for enduring rigidity and effective key is therefore apparent.

Reinforcing Floor Slabs

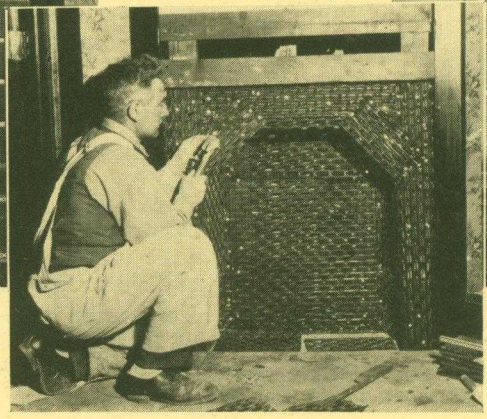
Floor tiles have the same need for inflexible support as wall or ceiling tile and a greater need, too, since the floor must bear weight of persons and objects.

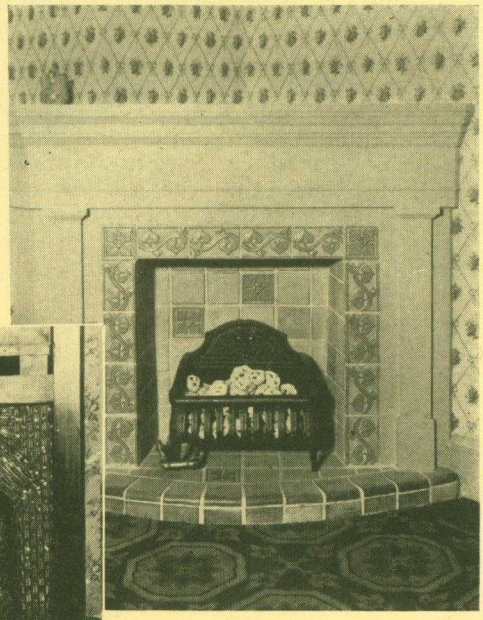
The cement floor slab which forms the basis of floor tile applications must, therefore, be reinforced for the best results.

A method which is originally credited to A. E. Dodd of Cleveland, and quite generally in use among tile men today, is to sink the floor joists of the room to be tiled, 2 inches below the general level. This can be done by using a 2-inch by 8-inch joist in place of a 2-inch by 10-inch. Matched flooring is laid on this with tar paper over it. One inch of the cement foundation coat is then spread and the Niles Expanded Lath laid over it as a reinforcing. Another inch of cement is spread over the reinforcing. The adhesive coat is spread over this and the floor tile laid to a total depth of



Left and center pictures show gas fireplace in tile and Bostwick "Truss-Loop" backing over which tile was applied. At the right is another attractive fireplace, all the work of Wm. J. Grigor, Propr. Warren Mantle and Tile Co. Tile manufactured by Mosaic Tile Co., Zanesville, Ohio.





four inches. Generous overlapping of the lath is a good precaution.

Mr. Dodd relates that he was recently consulted about the removal of a partition in remodeling the floor below such a slab as this and advised that the support of the partition might be removed without shoring. In fact, he guaranteed to replace the tile work if any damage occurred. Not so much as a hair crack was apparent.

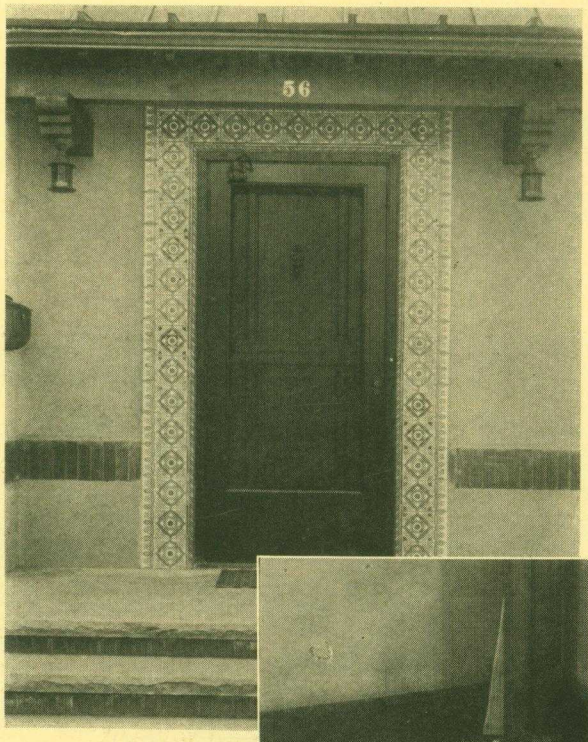
Over "Truss-Loop" Floor Slab

While Bostwick "Niles" Expanded lath offers advantages as a centering and reinforcement of slabs poured over wooden floor forms, it is possible to dispense with the floor forms and secure equally good results by using Bostwick "Truss-Loop" as a floor lath laid directly over the joists.

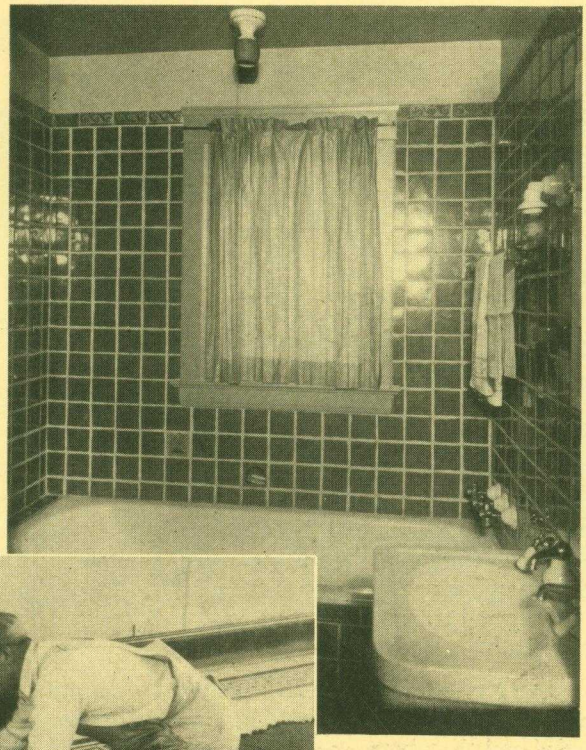
This method is essentially the same as that described in the chapter on floor and roof construction, except for the application of the tile.

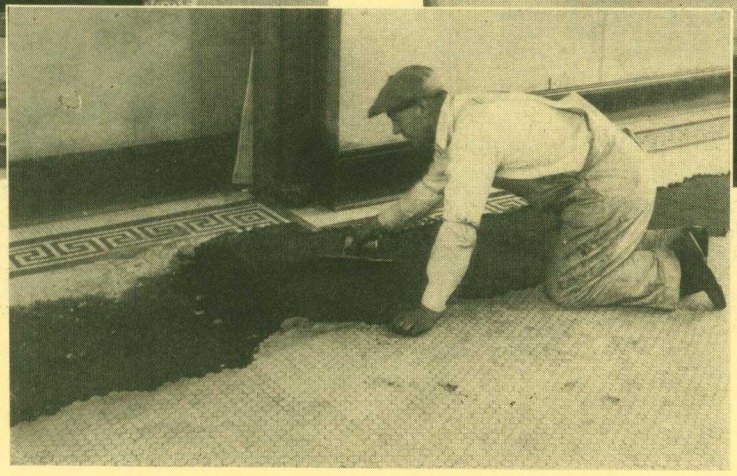
It has a slight advantage of compactness over the wooden form method, saving at least a portion of the vertical thickness of the wood.

The joists are first cut down to the desired level and strengthened, if necessary, by spiking parallel pieces of 2 by 4 to the cut down sections. The Bostwick "Truss-Loop" Lath is then laid, loops upward, directly over the joists and the concrete poured to a thickness consistent with the spacing. The adhesive coat and the tile are applied as previously described.



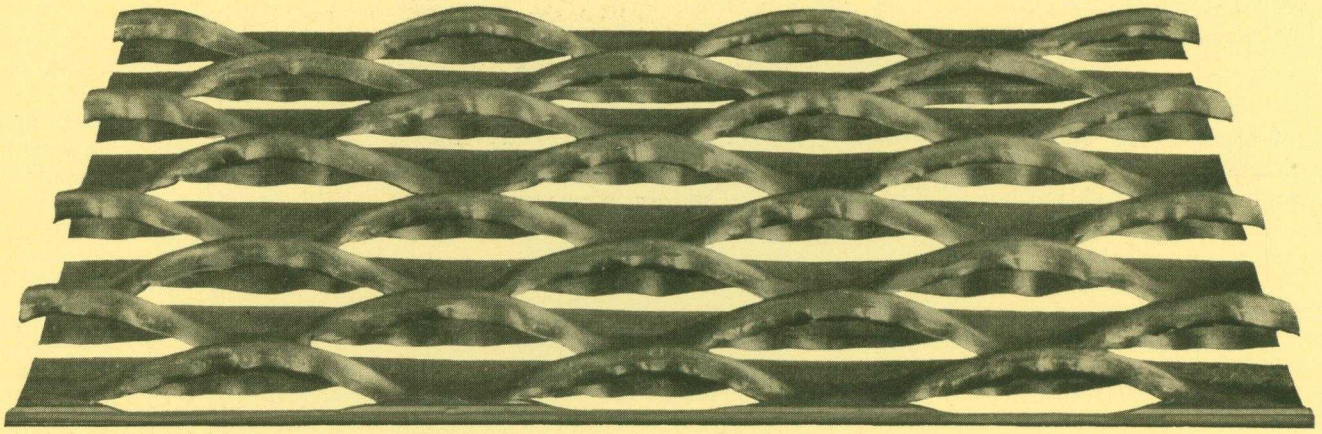
Above—Doorway of a stucco home, in which Moorish tiles are effectively used over a backing of Bostwick "Truss-Loop" Lath.





Glimpse of an effective bathroom of tile over Bostwick "Truss-Loop" Lath. Also, a typical floor tile operation.

Catalog of Bostwick Products



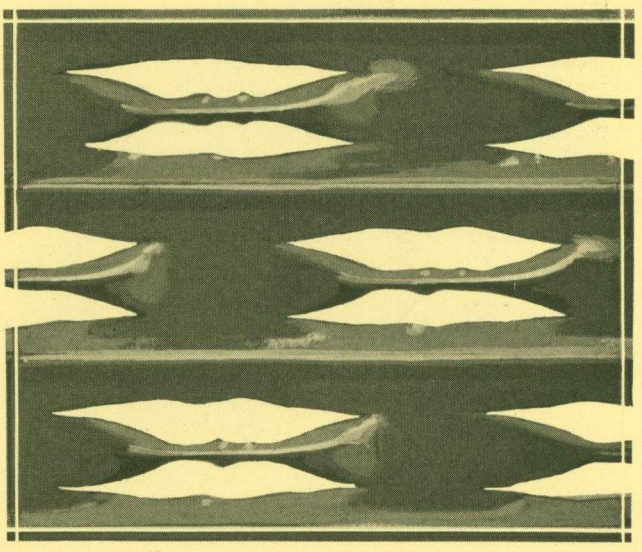
Unretouched photograph, actual size, of an unpainted section of Bostwick "Truss-Loop" Metal Lath in perspective position to show truss-loop construction.

Bostwick "Truss-Loop" Metal Lath

A DISTINCTIVE type of metal lath combining rigidity and self-furring qualities with plaster economy and most effective key.

Description—Bostwick "Truss-Loop" Metal Lath is fabricated in such a manner as to present parallel corrugations running lengthwise and alternating with series of staggered "truss-loops," raised and laterally compressed to afford an integral bracing in the surface of the lath, which multiplies its stiffness and also grips the plaster. There are 652 of these metal trusses in a square yard of Bostwick "Truss-Loop" Lath.

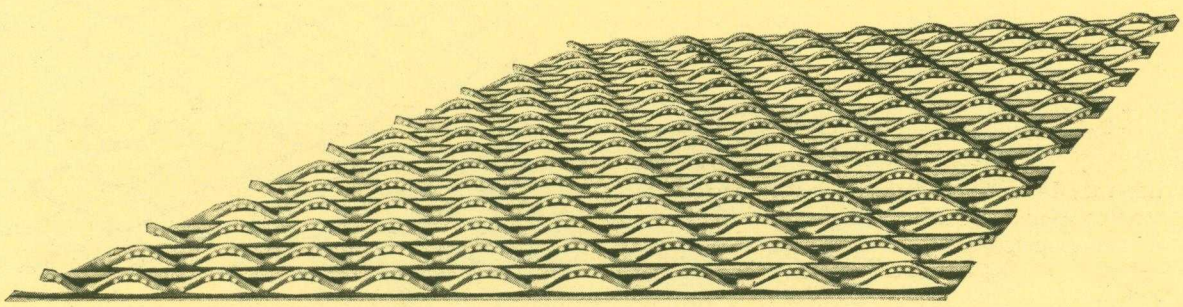
Plaster Key—A three-fold key results from plastering over Bostwick "Truss-Loop" Lath. The loop itself is deeply embedded and the plaster passing through the perforations is clinched to its upper and lower edges. If applied loop inward, the truss-loop expands the nub of plaster as it extends through the perforation, clinching it above and below. An additional key results from the portion of the nub which laps over the truss-loop.



Perpendicular view of Bostwick "Truss-Loop" Lath.

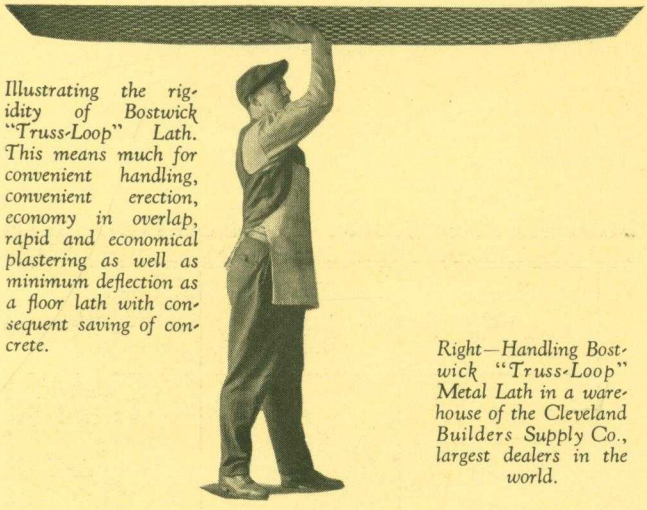
THE BOSTWICK STEEL LATH CO., NILES, OHIO

Bostwick "Truss-Loop" Metal Lath, Continued

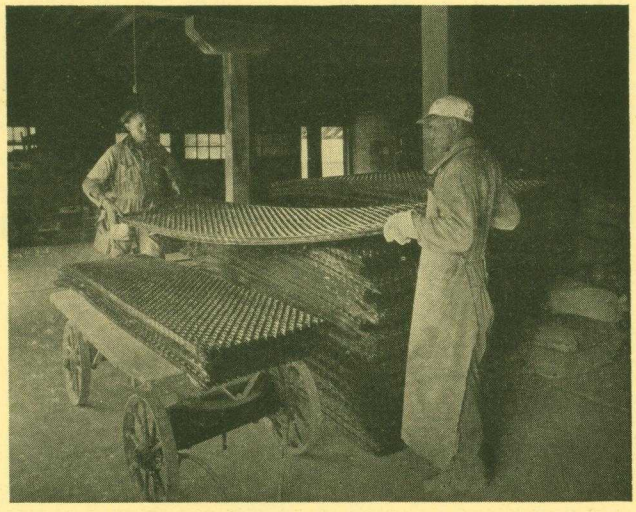


Larger section of Bostwick "Truss-Loop" Lath showing how ribs and loops alternate.

Advantages—Bostwick "Truss-Loop" Lath is easily handled on account of its stiffness and easily stored on account of its standard size and its nesting quality. It saves yardage because the narrow nesting rib at the edge takes the place of wasteful overlap. It can be nailed or wired in minimum time, because stretching is unnecessary. It does not yield under the plasterer's trowel, even when supports are spaced up to 24 inches on centers, with manifest economy. It saves plastering time as scratch and brown coats can be applied without moving scaffold. It saves plaster—often as much as 25 per cent in comparison with types of lath having a more open mesh.



Illustrating the rigidity of Bostwick "Truss-Loop" Lath. This means much for convenient handling, convenient erection, economy in overlap, rapid and economical plastering as well as minimum deflection as a floor lath with consequent saving of concrete.



Right—Handling Bostwick "Truss-Loop" Metal Lath in a warehouse of the Cleveland Builders Supply Co., largest dealers in the world.

TABLE OF WEIGHTS AND DIMENSIONS, BOSTWICK "TRUSS-LOOP" LATH

Weight, in lbs. per Square Yard	Sizes, Inches		For Centers Inches	Sheets per Bundle	Yards per Bundle	Furnished
	Width	Length				
4½	24	96	12, 16 and 24	9	16	Painted
4½	13½	96	12, 16 and 24	10	10	Painted
5¼	24	96	12, 16 and 24	9	16	Galvanized

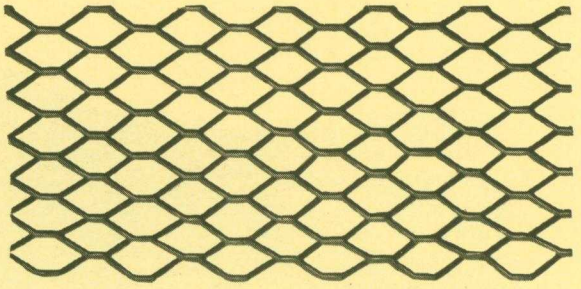
THE BOSTWICK STEEL LATH CO., NILES, OHIO

Bostwick "Niles" Expanded Metal Lath

A standard lath of good plaster holding capacity, made in the wide sheets favored by contractors and recommended as an eminently satisfactory material.

Bostwick "Niles" Expanded Lath is now manufactured in the weights standardized by the U. S. Department of Commerce simplified practice recommendation.

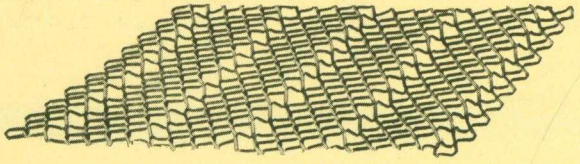
All sheets are 24 inches wide by 96 inches long and each sheet a true oblong with sides straight, which minimizes waste in overlapping.



Bostwick "Lock" Corrugated Self-Furring Lath

This lath is similar to Bostwick "Niles" Expanded lath except that it is crimped to give it a "Z" shaped section. This permits it to be used without furring and makes it a popular lath for exterior stucco construction, because it can be nailed directly to the sheathing.

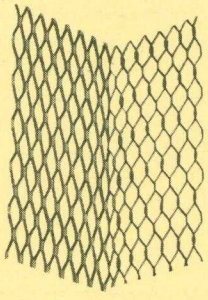
The "Z" corrugations run longitudinally with the lath at intervals of 1¾ inches. The crimp gives the lath a maximum elevation of ¼ inch above the supporting surface. Being used chiefly for exterior work it is sold preponderantly in the galvanized finish, but is also furnished with painted finish. Following are weights and dimensions:



WEIGHTS, DIMENSIONS, ETC., OF "NILES" EXPANDED AND "LOCK" CORRUGATED LATH

Weight, in lbs., per Square Yard	Size, Inches		For Centers, Inches	Sheets per Bundle	Yards per Bundle	Furnished
	Width	Length				
2.2, 2.5, 3.0 and 3.4	24	96	12 and 16	9	16	Painted
2.5 and 3.4	24	96	12 and 16	9	16	Galvanized

Bostwick Cornerite



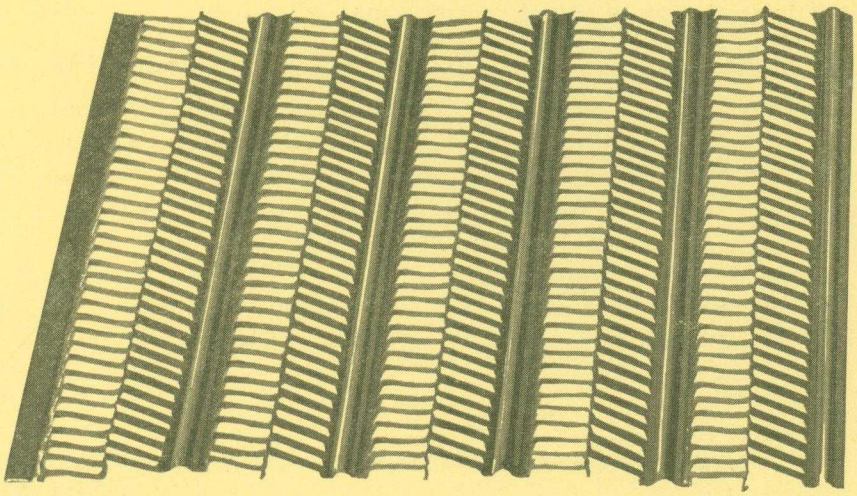
Bostwick Cornerite consists of strips of expanded lath eight inches in width, bent to a right angle for protecting interior corners of walls and ceilings against cracking. Highly important in metal lath construction and even more necessary where wooden lath is used.

Stock length, 8 feet; 200 pounds per bundle of 1,000 lineal feet.

THE BOSTWICK STEEL LATH CO., NILES, OHIO

Bostwick Flat-Rib Metal Lath

(Supplement to Bostwick Economy)



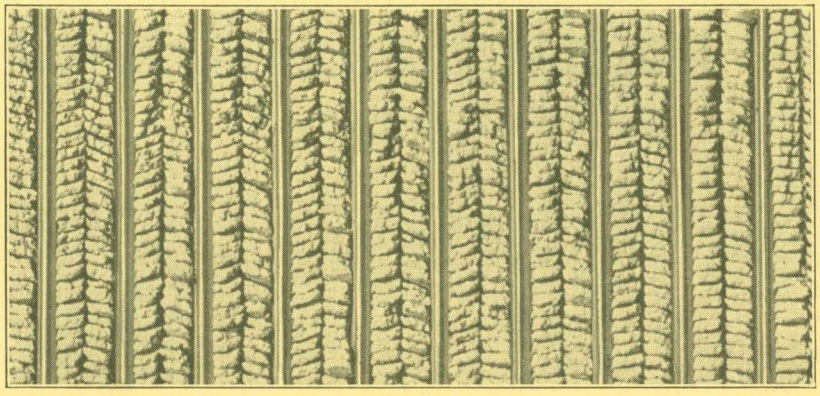
Perspective of Bostwick Flat-Rib Lath. Note stiffening corrugation in flat rib, as well as vertical position of intermediate rib which promote stiffness. Note also that main rib is not offset, but lies flat which promotes plaster economy.

PLASTER saving is combined with low first cost rigidity, smoothness and all 'round satisfaction in the new Bostwick Flat-Rib Metal Lath.

No feature of metal lathing practice has been so marked as the rapid increase in the use of flat-rib expanded laths. The Bostwick Steel Lath Co., long known for its complete, quality, metal lath line, offers a Flat-Rib Lath of superior stiffness with accurate edges that minimize overlap and which can be plastered more economically than any other type of lath excepting Bostwick "Truss-Loop" Metal Lath.

Superior Rigidity

A distinctive corrugation, shown in the profile on page 22 b, gives Bostwick Flat-Rib Lath a stiffness not found in



Reverse side of Bostwick Flat-Rib Lath, after plastering, showing the large bearing surface and the economical but sufficient plaster key.

THE BOSTWICK STEEL LATH CO., NILES, OHIO

most flat ribs. The vertical position of the intermediate rib, as well as the vanes of metal between ribs, heighten their effect and improve the plaster holding quality.

Its Plastering Economy

Look at the picture of the reverse side of Bostwick Flat-Rib Lath and see its small but sufficient keys as well as the well-distributed bearing space of the flat ribs, all of which represents plastering economy.

The Answer to Wood Lath

Bostwick Flat-Rib Lath with its low first cost and plastering economy leaves little ground for the use of wood lath. At a slight advance in finished wall and ceiling cost, any building can be given the fire resisting qualities and interior permanence inseparably connected with metal lathing.

Splendid in Wood Construction

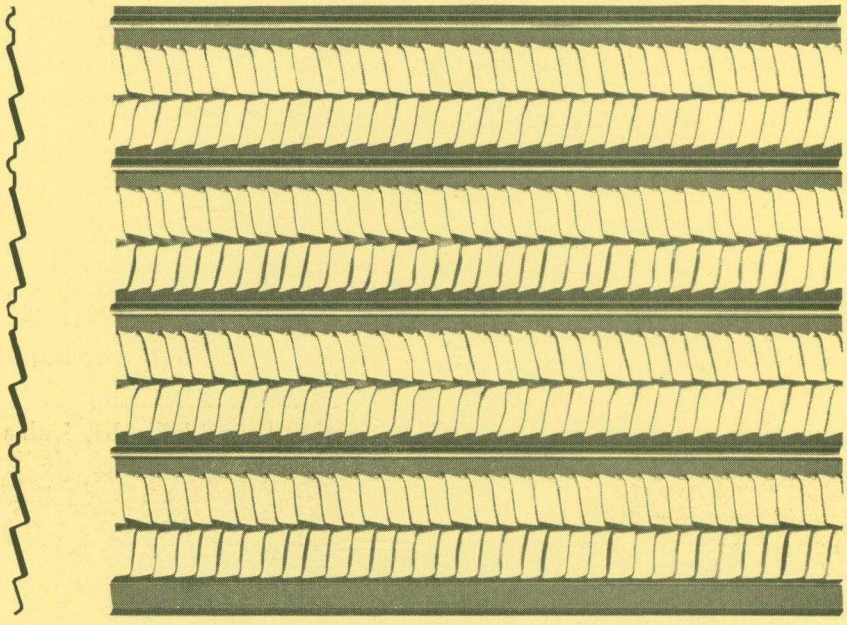
Bostwick Flat-Rib Lath offers every advantage in wood construction, being easy to handle, easy to nail, self-furring over flat surfaces and adapted to moderately wide spacing of supports. Its cost is such as to appeal to the investment builder.

Sizes and Weights

Bostwick Flat-Rib Lath is manufactured in two weights—3.0 and 3.4 pounds per square yard. Sheets are 24 x 96 inches in size, or 1 7-9 yards. They are packed 9 sheets in a bundle, or 16 yards.

Furnished in Copper Bearing Steel

which resists corrosion, as an alternative for regular steel stock, at a slight advance in price.

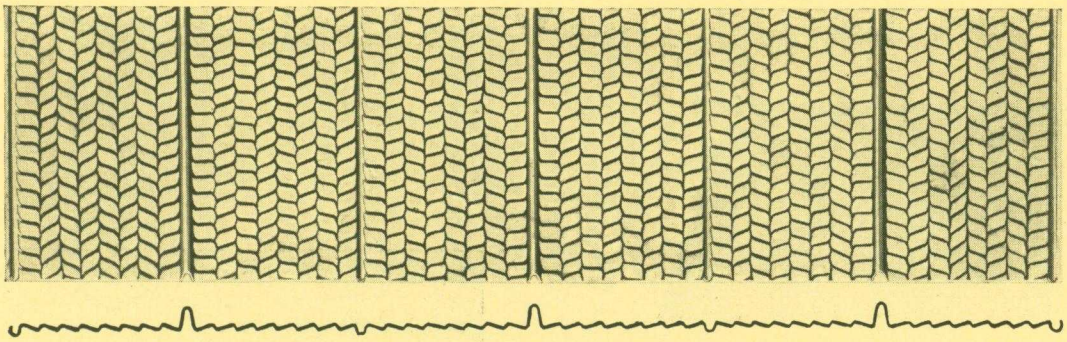


Direct vertical view of Bostwick Flat-Rib Lath.

Insert this sheet in your copy of the Bostwick Catalog (Bostwick Economy) between pages 22 and 23.

THE BOSTWICK STEEL LATH CO., NILES, OHIO

12-27-15-SP-HPB



Bostwick 3/8-Inch Rib Expanded Lath

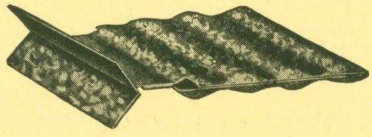
A Rib Expanded Lath combining good key with rigidity and a mesh which facilitates the spread of plaster giving a satisfactory key. The 3/8-inch ribs of metal are spaced four inches apart, with lighter 1/8-inch ribs midway between the larger ribs, making the lath unusually rigid for wide spans when used in accordance with the specifications of the Associated Metal Lath Manufacturers for rib lath material.

The sheets nest automatically at the outer ribs, which are smaller than the main ribs. This with straight, parallel outside edges obviates wasteful overlap.

Bostwick 3/8-inch Rib Expanded Lath is especially useful for suspended ceilings and for solid partition work. It is also extensively used as a floor lath in connection with metal lumber.

Weight, Lbs., per Square Yard	Size of Sheet Inches	Sheets per Bundle	Yards per Bundle	For Centers, Inches	
				Walls	Ceilings
2.5	24x96	9	16	16–20	16–20
3.0	24x96	9	16	19–24	18–22
3.4	24x96	9	16	24–30	22–28
4.0	24x96	9	16	32–36	24–30

Bostwick Metal Wall Plug

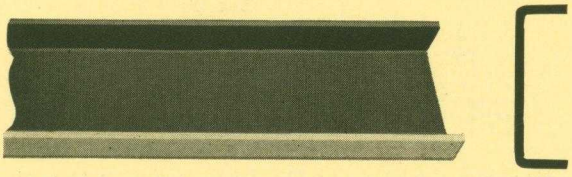


The Bostwick Metal Wall Plug offers the ideal method of attaching interior trim to the masonry walls, much better than nailing into mortar joints which give temporary and unsatisfactory hold or wooden blocks which split or shrink and loosen from the wall.

Made of heavy galvanized stock, the Bostwick Wall Plug is sealed against mortar in the corrugations by a bevel of metal. Supports weight without flattening and everlastingly holds the nails.

Length, 2 7/8 inches; width, 2 1/4 inches; packed 500 to carton; shipping weight, 50 pounds.

Bostwick Cold Rolled Steel Channels

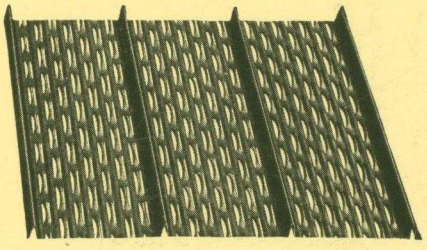


Bostwick Cold-Rolled Channels are a staple product of super-standard quality. Selection of the metal and exactness in production have given it a dependability both in handling and in service. Note the perfect squareness of the shoulder, which provides greater rigidity and resistance to buckling strains. Bostwick Channels are rolled from special open-hearth steel.

Gauge	Size, inches	Weight, lbs., per 1,000 ft.	Depth of flange
16	3/4	276	3/8
16	1	332	3/8
16	1 1/2	456	3/8
16	2	580	3/8

THE BOSTWICK STEEL LATH CO., NILES, OHIO

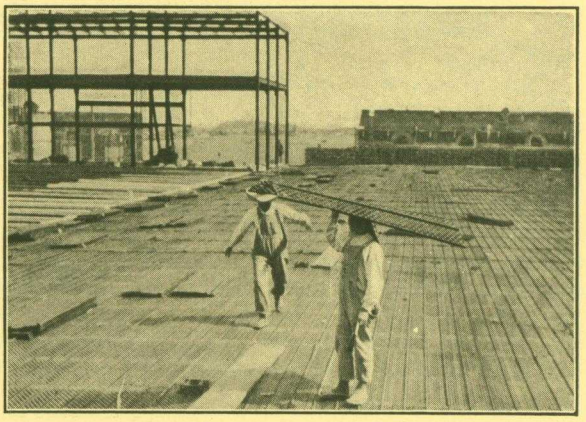
Bostwick Truss-V-Rib Metal Lath



This lath has the loop structure of the famous Bostwick "Truss-Loop" Lath, with the introduction of four longitudinal ribs, per sheet, each three-quarters of an inch in height. It is made from the best open-hearth sheet steel and every ounce of the metal is retained.

In situations calling for maximum rigidity, such as concrete floor and roof construction, it has no equal. In addition to its depth of rib, it offers a more nearly continuous sheet to retain the wet concrete and avoid losses of grout which sometimes weaken this type of construction. It is popular for concrete porch floors, frequently used for suspended ceilings where requirements are severe, as well as for special fire resisting applications. In two-inch plaster partitions, it may be erected vertically without channels, yielding good results.

Adjoining ribs nest perfectly, giving a union of great strength with economical overlap. Ribs are spaced seven inches apart in a sheet width of 21 inches.



Modelo Brewery, Mexico City. Showing rigidity of Bostwick "Truss-V-Rib" during construction.

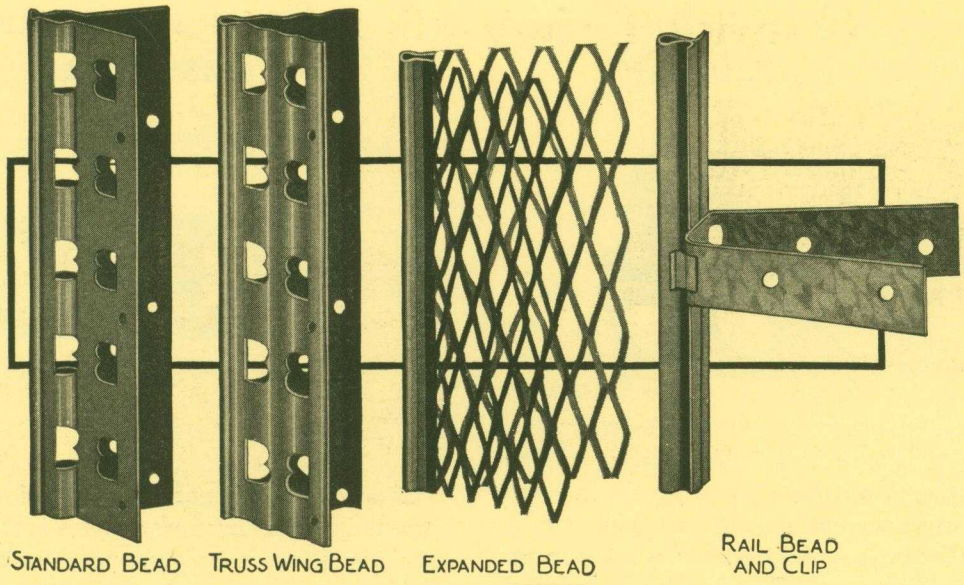
TABLE OF WEIGHTS AND DIMENSIONS, BOSTWICK "TRUSS-V-RIB" LATH

Weight in lbs. Per Square Foot	Size of Sheet	Square Feet per Sheet	Sheets per Bundle	Square Feet per Bundle
.75	21x 72	10.5	6	63.
.75	21x 84	12.25	6	73.5
.75	21x 96	14.	6	84.
.75	21x108	15.75	6	94.5
.75	21x120	17.5	6	105.

TABLE OF SAFE LOADS, POUNDS PER SQUARE FOOT, FOR "TRUSS-V-RIB" CONCRETE SLABS

Thickness of Slab	Wt. of Slab Lbs. Per Sq. Ft.	Wt. Metal per Sq. Ft.	Span in Feet—Safety Factor 4								
			2′-0″	3′-0″	4′-0″	5′-0″	6′-0″	7′-0″	8′-0″	9′-0″	10′-0″
1½″	19	.75	124	68	40						
2″	25	.75	270	142	98	67	38				
2½″	31	.75	291	235	178	102	72	45			
3″	37	.75	511	372	214	136	108	68	38		
3½″	43	.75		426	260	166	115	84	63	48	26

THE BOSTWICK STEEL LATH CO., NILES, OHIO



Bostwick Corner Bead

Bostwick Corner Bead should be used on every projecting angle of the plastered room, whether with metal or wood lath construction. Bostwick beads provide accurate grounds for the plaster and protect the plastered corner against damage as long as the building is in use.

Four types of Bostwick Corner Bead assure a bead for every situation and preference. Their separate merits may be described as follows:

Bostwick Standard Bead—A bead that meets maximum specifications, being made of heavy galvanized metal with wide wing for full ¾-inch grounds.

Bostwick Truss-Wing Bead—A bead for any depth of plaster grounds. Corrugated wing imparts unusual rigidity and makes a dependable bead in every situation.

Bostwick Expanded Bead—This bead has a wide wing of expanded metal that integrates closely with the lath structure and affords unusually good key.

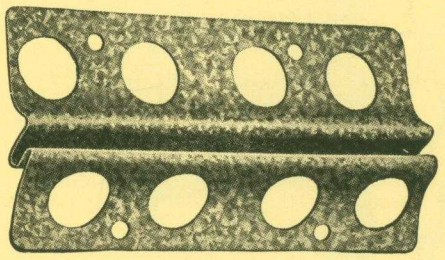
Bostwick Rail Bead—A narrow bead easily curved for arched openings and suitable for other situations. Rail bead clip gives it sure attachment to the lath construction.

TABLE OF DIMENSIONS, BOSTWICK CORNER BEAD

Type of Bead	Lengths, Feet	Standard Package		Carload Minimum, Feet
		Feet, Length	Pounds, Weight	
Standard	6, 7, 8, 8½, 9, 10, 11, 12	1,000	250	144,000
Truss Wing	6, 7, 8, 8½, 9, 10, 11, 12	1,000	200	180,000
Expanded	6, 7, 8, 8½, 9, 10, 11, 12	1,000	200	188,000
Rail with clips	6, 7, 8, 8½, 9, 10, 11, 12	1,000	180	200,000

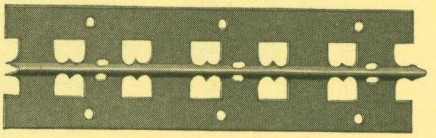
THE BOSTWICK STEEL LATH CO., NILES, OHIO

Bostwick "Invisible" Picture Moulding



This moulding is applied before the plaster. When finished, the moulding itself is invisible, showing only the opening slot for the picture hook. It is popular in school buildings, office buildings and hospitals and is also rapidly coming into use for private residences. It is applicable to wood lath as well as metal lath construction. Bostwick "Invisible" Picture Moulding is furnished in standard lengths of 10 feet and weighs 225 pounds to the 1,000-foot bundle. It is always shipped crated in order to preserve its straight edge.

Bostwick Metal Base Bead



This is an especially efficient base bead for heavy service on uneven grounds. Extra plaster keys in the flange increase the holding power and the gymped edge gives a solid nail hold in any surface depressions without changing the lie of the bead.

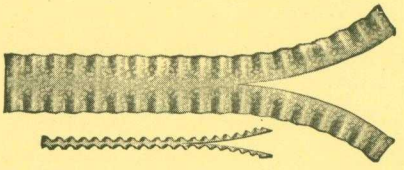
Standard lengths, 8 feet; shipping weight, 150 pounds per 1,000 feet.

Bostwick Corrugated Metal Wall Tie

Made from heavy galvanized metal, with deep corrugations, giving maximum bonding power. Regular size, 7 inches long by 7/8 inch wide. Any reasonable size made to order.

Packed 1,000 to box. Weight, 35 pounds. All ties punched for veneer work.

Bostwick "Y" 3-Stress 3-Way Wall Tie



A new departure. Stress and strain of wall led three ways. Change of position in wet mortar will not affect holding power. Ties every brick with usual number of ties, or usual number of brick with half the number of ties.

Packed 1,000 per box; weight, 65 pounds. Heavy galvanized stock with deep corrugations at various angles. All ties punched for veneer work.

Specification Section

General Specifications

For Bostwick "Truss-Loop" Metal Lath

All of the Metal Lath used on Walls and Ceilings shall be Bostwick Standard "Truss-Loop" Metal Lath, Painted, weighing 4½ pounds per square yard.

The lath shall be applied at right angles to the carrying members.

The lath shall be turned around all projecting corners and at intersecting angles shall have an independent strip of expanded lath, or Bostwick Cornerite, not less than eight inches wide fitted into the angle vertically, bent into angle shape and well secured in place.

The horizontal lathing shall run back over the vertical strip and be well secured to bearings at that point, thereby reinforcing same.

The ceiling lathing shall be turned down on the walls at least four inches and firmly secured to same.

Specification No. 1

Bostwick "Truss-Loop" Lath in Wood Frame Construction

The sidewall lathing shall come up neat in angle and be well nailed in place.

The lath shall be applied at right angles to the carrying members and joints shall be broken.

Where sidewall lathing comes on a line with brick or masonry, it shall run over on same at least four inches and be firmly secured thereto.

The lath shall be firmly nailed to the wood joists or studs every four inches across the sheets at bearings with 1¼-inch barbed roofing nails.

All lathing to be left in good condition for plastering.

On non-carrying partitions, Bostwick "Truss-Loop" Metal Lath may be nailed to studs set at 24-inch centers. The lath should be laced twice along the side edges between bearings when 24-inch spacing is used, and great care should be taken in nailing the lath.

When used on 16-inch centers on walls or ceilings, "Truss-Loop" Metal Lath needs no lacing along side edges between bearings.

Specification No. 2

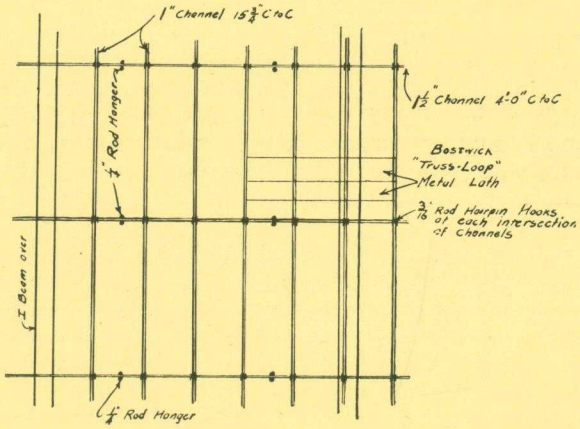
Bostwick "Truss-Loop" Lath in Attached Ceilings Under Pan Construction

Where suspended ceilings occur over short spans only, as in the case of "Pan Construction," where lath touches soffits of concrete joists at frequent intervals, the furring is to be as follows:

Between joists provide in the concrete work hangers of $\frac{3}{16}$-inch rods 4 feet on centers. These rods are to be set in the arches between and parallel to concrete joists, and halfway between the same. Fasten ¾-inch channels to these $\frac{3}{16}$-inch rods by wrapping the rods around the channels and twisting the rods around themselves above the channels.

Also fasten ¼-inch diameter rods firmly to the bottoms of soffits of concrete joists with No. 14 annealed wire dropped through bottom sides of soffits about 16 inches center to center.

To the bottom of the ¼-inch diameter rods and the ¾-inch channels, apply Bostwick "Truss-Loop" Metal Lath, Standard, Painted, weighing 4.5 pounds per square yard, at right angles to the carrying members, breaking joints and lacing the lath to the rods and channel with No. 18 soft annealed galvanized wire, the wire laces to be spaced not over 4 inches center to center across the face of the sheet. The lath shall extend over the entire furred area in a true level plane and shall be accurately set and ready for plastering.


1" Channel 15¾" C to C
½" Channel 4'-0" C to C
¼" Rod Hanger
Bostwick "Truss-Loop" Metal Lath
3" 18 Rod Hairpin Hooks at each intersection of Channels
I Beam over
¼" Rod Hanger

PLAN

THE BOSTWICK STEEL LATH CO., NILES, OHIO

Alternate Method

Bostwick "Truss-Loop" Metal Lath may be safely used on furring set 24-inch centers under "Pan Construction" floors when applied as follows:

Run 1-inch channels between the concrete joists and parallel to same. This channel is fastened to $\frac{3}{16}$-inch rod hangers which have been dropped from the arches overhead and the rods should be spaced three feet center to center.

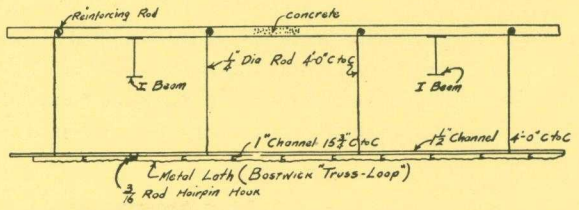
Apply Bostwick "Truss-Loop" Metal Lath, Standard, Painted, weighing 4.5 pounds per square yard, to the 1-inch channel with No. 18 soft annealed galvanized wire, so that the lacings occur not over four inches center to center across the face of the sheet. Joints should be broken.

Note: Special care should be exercised in securing channels and lacing the lath when the lath is fastened at 24-inch centers.

Specification No. 4

Bostwick "Truss-Loop" Lath in Suspended Ceilings

From overhead construction drop from roof slab or floor slab ¼-inch diameter steel rods, absolutely and securely cast through said concrete slab and spaced in a straight line, both longitudinally and crosswise, four feet on centers. To



CROSS SECTION

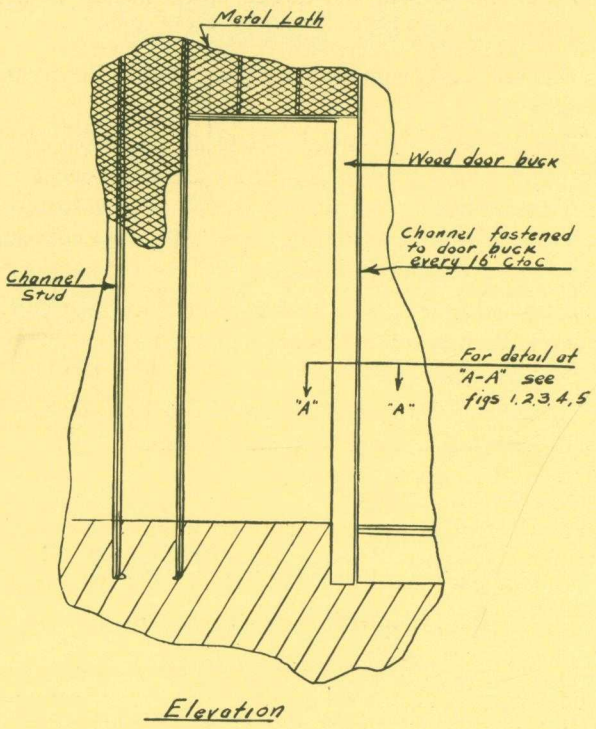
the ¼-inch rods attach 1½-inch channels by turning or hooking ends of the ¼-inch rods around the 1½-inch channels and then twisting the rods around themselves above the channels. The 1½-inch channels are to be hung in parallel lines four feet apart and securely fastened in such a manner as to make the furring absolutely horizontal in every direction or evenly pitched as may be required by the drawings.

To the bottom of the 1½-inch channels at right angles to same firmly secure at each intersection 1-inch channels not over 16 inches on center with $\frac{3}{16}$-inch hairpin hooks or with No. 15 annealed wire, saddle tied. Apply Bostwick "Truss-Loop" Metal Lath, Standard, Painted, weighing 4½ pounds per square yard, at right angles to the 1-inch channels, with No. 18 soft annealed galvanized wire, so that the lacings occur not over four inches center to center across the sheet of lath.

Specification No. 5

Bostwick "Niles" Expanded Lath in Solid Partitions

Weights of Metal Lath—Bostwick Niles Expanded Metal Lath weighing 2.2 pounds or 2.5 pounds per square yard, shall be used and studs shall have a spacing of 12 inches on center.



Elevation

Size and Weight of Studs—Studs for solid partitions to a height of ten feet shall be ¾-inch channels weighing not less than 276 pounds per thousand lineal feet. For partitions over ten feet, 1-inch channel, weighing not less than 332 pounds per thousand lineal feet, shall be used for studs.

Tie Wire—Tie Wire shall not be less than No. 18 gauge galvanized soft annealed.

Erection of Studding—Studs shall be secured in position by bolting to floor and ceiling runners or by bending a shoe at the end of studs and wiring, nailing, or bolting to plates, or by inserting ends of studs in holes drilled in top of concrete or other masonry floors or punched in soffits of masonry ceilings, or by bending a shoe at ends of studs and anchoring to holes drilled in floors and ceilings, or where metal lath ceilings are used, a small hole shall be made in the ceiling lath and at the end of the channel allowed to project through it and be wired to a runner channel attached to the ceiling lath.

Channels of a length shorter than the total height of the partition are permissible, but when pieced out with short

lengths the splicing shall be made by lapping not less than 8 inches, with the flanges interlocked and securely wired together.

Erection of Metal Lath—Metal Lath shall be applied to one side only of the channels, with the long dimension of sheet across the studs; ends of sheets shall be staggered one above another. Lathing shall commence at the top of the partitions and be carried down with the edge of the lower sheet lapping over the upper (not vice versa). If metal lath is not used on the ceiling, the lathing may start at the top of the wall and be bent and carried up six inches on to the ceiling so that no joints occur at juncture of ceiling and walls; and on walls all lath shall be started one stud away from corner and be bent into the angle and carried on to the abutting wall so as to avoid a joint at juncture of walls.

Sheets shall be wired to studs at intervals not exceeding six inches, and a tie shall occur where sides of sheets lap at channels. There shall be one tie on side laps half way between channels.

Expanded Metal Lath shall be lapped at sides not less than one-half inch, and at ends not less than one inch. End laps of sheets should generally occur only over studs; if between studs, sheets shall be securely laced with No. 18 gauge galvanized annealed wire.

Note: Solid partitions over six feet high shall be temporarily braced horizontally on the channel side at intervals not exceeding six feet vertically, before applying plaster. Such bracing shall not be removed until scratch coat on the lath side of the partition has set.

Plastering should begin at bottom, instead of at top of partition, in order to avoid danger of buckling construction.

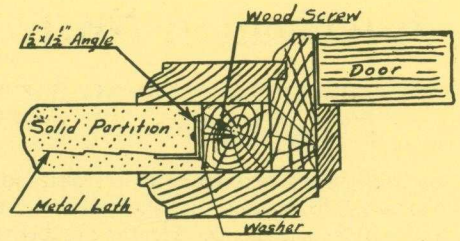


FIG 1

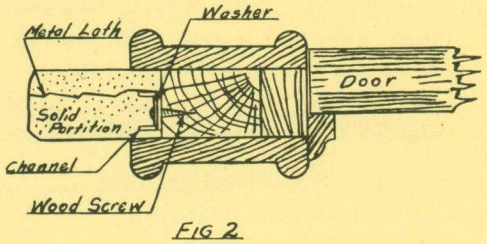


FIG 2

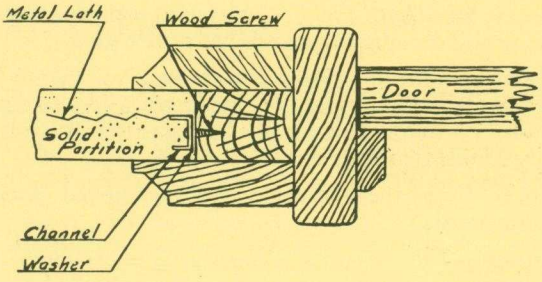


FIG 3

Solid Partitions in Buildings with Wood Floors and Wood Ceiling Joists

In buildings with wood floors or with wood floor joists, solid stud partitions shall be constructed in precisely the same manner as in buildings with incombustible floors or ceilings (see Specification above), except that when floor and ceiling runners are used they shall be spiked directly to the wood floor or the ceiling joists; provided, also, that alternate methods of securing the channels to the wood floors described as follows shall be permissible:

Channels may be secured to wood floors or to wood ceiling joists by driving two nails into the wood, one on either side of the web of the channel, leaving one inch of the nails undriven, or the end of the channel may be bent into a shoe, and a nail driven through a hole punched in the shoe, into the floor or ceiling, or the channels may be set in shoes secured to the floor. For wood joist ceilings, if the joists are not in the proper location, short pieces of wood shall be cut in between them and the channels either wired or nailed to such short pieces of wood.

Note: The channel door stud should be attached to the wood door buck by screws. One screw should be placed about six inches from the bottom of the door buck and the top screw down from the head of the door buck, the intervening screws should be spaced about 16 inches apart along the door buck. This is important, as it will prevent cracks in the partition which are caused by breaking way of the door buck from the channel.

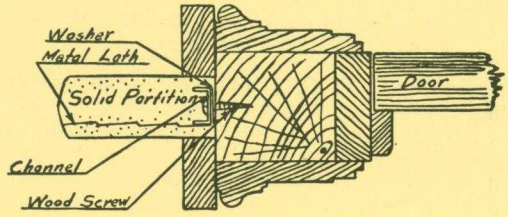


FIG 4

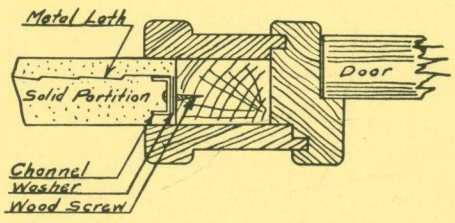


FIG 5

Specification No. 6

Two-Inch Truss-V-Rib Metal Lath Partitions

Partitions may be erected with 75 lb. per square foot Bostwick Truss-V-Rib, without channel iron bracing where not more than 10 feet high, the Metal Lath being placed vertically, fastened securely to the floor and ceiling and returned at the door bucks, screwed same as before mentioned, truly braced, straight and out of wind and left ready for plastering. For greater heights than 10 feet use channel iron support.

Specification No. 7

Exterior Metal Lathing Over Sheathing

Lath—All metal lath used for the exterior to be "Truss-Loop" Standard, galvanized, as manufactured by The Bostwick Steel Lath Co., Niles, Ohio, weighing not less than five and one-quarter pounds per square yard.

Sheathing—Sheathing boards to be not less than 6″ nor more than 8″ wide, dressed on one or both sides to a thickness of ⅞″ and laid diagonally across the wall studs and fastened with two nails to each stud.

Paper—Over the sheathing apply approved grade of building paper.

Lathing—Then apply "Truss-Loop" metal lath horizontally with the loops turned in to fur or offset lath from the paper and provide proper key for the stucco. Where lath is applied on large panels or surfaces, break joints with each sheet laid.

The lath to be nailed with 1¼″ roofing nails driven into the studs and 4″ apart across the sheet.

Flashings—Build in over all window and door heads IX weight tin flashings, said flashings to be painted on both sides with a good heavy coat of paint. 18 oz. sheet copper flashing is also used.

Specification No. 8

Exterior Metal Lathing Without Sheathing

Framing—Studs to be spaced not more than 12″ on centers.

The Lath—Shall be Bostwick "Truss-Loop" Metal Lath, manufactured by The Bostwick Steel Lath Co., Niles, Ohio, galvanized and weighing not less than five and one-half pounds per square yard. The lath shall be placed horizontally across the studding, firmly secured with 1¼″ galvanized roofing nails every 4″ vertically and at each stud, each sheet lapped on the nesting rib of the previous sheet, and each joint broken, where sheets join, lap 4″ and tie with No. 18 gauge soft, galvanized, annealed wire, fold sheets around each corner or bend 6″ strips around each corner and nail securely, applying the corner bead, over the strips of lath; where brick and wood construction are designed, lath should be lapped 4″ on the brick work and securely fastened.

Specification No. 9

Bostwick "Truss-V-Rib" Back Plastered for Exterior Walls

Lath—To be "Truss-V-Rib" Metal Lath, manufactured by The Bostwick Steel Lath Co., Niles, Ohio.

The lath to be applied horizontally with the ribs running at right angles to the supporting members and with joints broken at every sheet where possible.

For frame construction, the lath is to be firmly nailed at every rib to the supporting members with 1¼″ galvanized roofing nails.

For metal construction, the lath is to be firmly laced at every rib to the supporting members with No. 18 soft, annealed, galvanized lacing wire.

Stucco—On exterior surface of the lath apply stucco by hand, or with cement gun, to the desired thickness, then back plaster on the interior surface to a thickness of at least ½″ over the point of the rib.

Note: "Truss-V-Rib" is the only metal lath on which stucco can be successfully applied with the cement gun without the use of paper backing, thus permitting the wall to be properly back plastered.

Specification No. 10

Bostwick "Truss-V-Rib" Lath in Roof Construction

All lath to be "Truss-V-Rib," manufactured by The Bostwick Steel Lath Co., Niles, Ohio, and to be laid over purlins or rafters with the ribs turned down and at right angles to same. Lath to be firmly secured to purlins or rafters as follows:

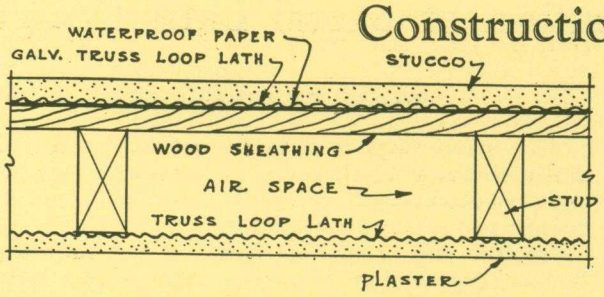
For frame construction, the lath is to be securely nailed at each rib to the supporting members with 1¼″ galvanized roofing nails.

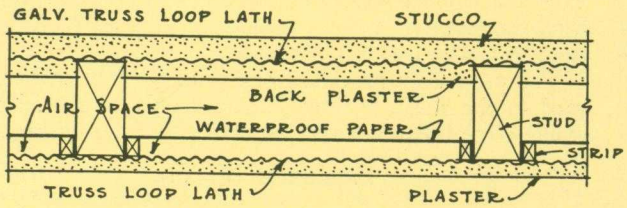
For metal construction, the lath is to be clipped to supporting members with $\frac{3}{16}$″ iron clips.

The under or ceiling side of the lath to have a coat of cement plaster ½″ thick applied either by hand or with a cement gun.

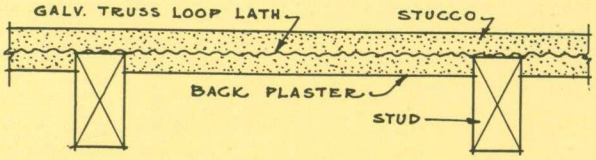
For thickness of slabs, spans and safe loads, see table given above.

Construction Methods

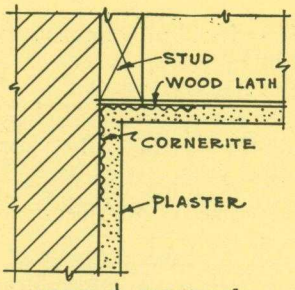




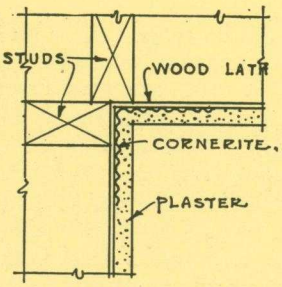
• TWO TYPES CONSTRUCTION FOR •
• EXTERIOR WALLS OF FRAME — •



• TYPE OF EXTERIOR WALL GOOD •
• FOR GARAGES, ETC. • •

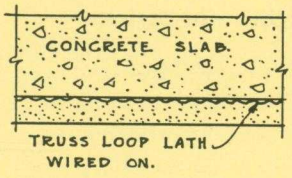


• STUD & MASONRY •

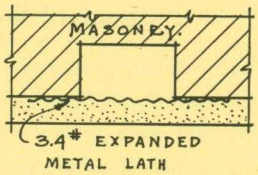


• STUD WALLS •

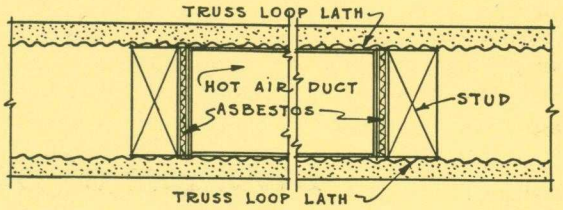
• • USE OF CORNERITE • •



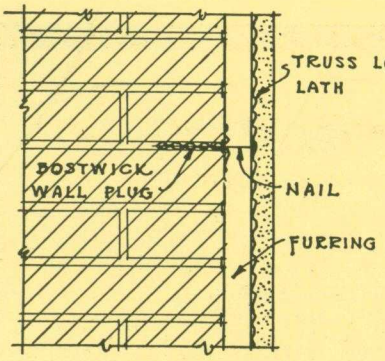
• CEILING APPLIED •
• ON CONCRETE SLAB •



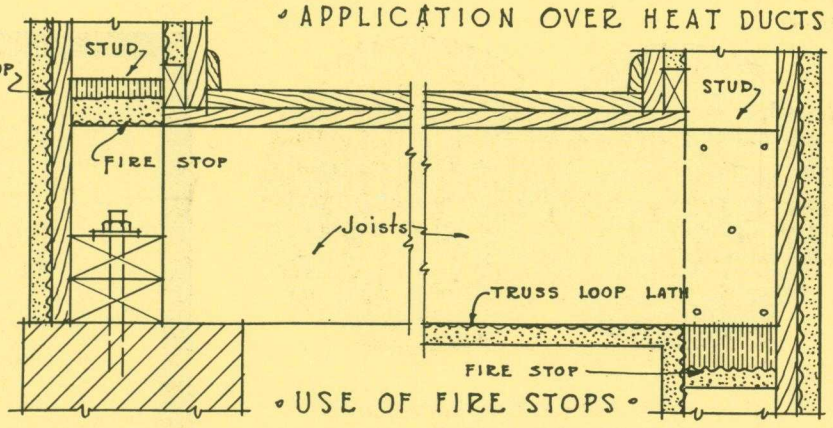
• TREATMENT •
• OF CHASES •



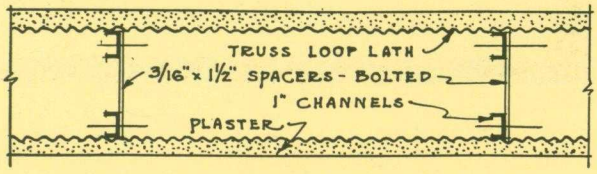
• APPLICATION OVER HEAT DUCTS •



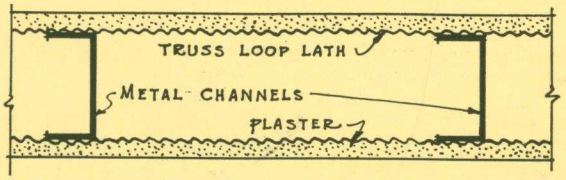
• USE OF WALL PLUG •



• USE OF FIRE STOPS •



• NON BEARING PARTITION WITH •
• SPACE FOR CONDUITS, PIPES, ETC. •



• METAL STUD PARTITION •

THE BOSTWICK STEEL LATH CO., NILES, OHIO

U. S. Government Standardization of Metal Lath Weights

All Bostwick Lath is made and sold in accordance with the principles laid down by the U. S. Department of Commerce in its Simplified Practice Recommendation No. 3.

This recommendation, which has been welcomed by all leading manufacturers, has resulted in eliminating useless varieties and provides for the specification of all Metal Lath on the basis of weight per square yard, rather than by gauge or other confusing standards.

The Bostwick Steel Lath Co. furnishes Lath in all the recognized standard weights as follows, in either Steel or Iron Alloy:

Standard Weights and Styles

4.5 lb. painted (our Bostwick "Truss-Loop" Metal Lath)
3.4 lb. painted (our Bostwick "Niles" Expanded Lath)
3.4 lb. galvanized (our Bostwick "Niles" Expanded Lath)
3.0 lb. painted (our Bostwick "Niles" Expanded Lath)
2.5 lb. painted (our Bostwick "Niles" Expanded Lath)
2.5 lb. galvanized (our Bostwick "Niles" Expanded Lath)
2.2 lb. painted (our Bostwick "Niles" Expanded Lath)

Standardized Dimensions

Such standardization is in the interest of the supply dealer, builder and architect. It means fewer kinds of stock and more exact comparisons between different types of lath. Specification is a simpler matter.

Another step in standardization is the furnishing of Bostwick Laths only in the one stock size of 24 x 96 inches. This size is more convenient to handle and apply and has been the favorite of the contractor ever since its introduction. It has an area of 1 7-9 yards.

The previously prevailing size of 13½ by 96 inches, one yard to the sheet, is now furnished only to special order where some feature of the job makes this size necessary.

Yards Per Bundle

Bostwick Lath is packed in bundles of nine sheets per bundle, which means 16 yards, a convenient quantity both for storage and for computations.

Bundles are not broken in shipping orders.

All lath, not galvanized, is painted. No reduction in price is made for unpainted lath, that may be furnished as a special order.

Instances of Bostwick Recognition

World's Columbian Medal awarded to Bostwick Steel Lath Company in 1893 for superior merit of product.

THE WAR DEPARTMENT OF
THE UNITED STATES OF AMERICA
RECOGNIZES IN THIS AWARD FOR DISTINGUISHED SERVICE
THE LOYALTY ENERGY AND EFFICIENCY IN THE PERFORMANCE
OF THE WAR WORK BY WHICH
Bostwick-Steel Lath Co.
AIDED MATERIALLY IN OBTAINING VICTORY FOR THE ARMS
OF THE UNITED STATES OF AMERICA IN THE WAR WITH
THE IMPERIAL GERMAN GOVERNMENT AND THE IMPERIAL
AND ROYAL AUSTRO-HUNGARIAN GOVERNMENT

Certificate of War Service awarded to the same company for patriotic endeavors during the recent World War.

THE BOSTWICK STEEL LATH CO., NILES, OHIO

8-27-15M-SP-HPB

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TRUSS-LOOP
METAL LATH

THE BOSTWICK STEEL LATH CO.
NILES, OHIO